Ryan,Kelly

From: Dan Wagoner [dwagoner@dominionterminal.com]
Sent: Friday, September 01, 2006 2:42 PM
To: Ryan,Kelly
Subject: DTA draft (2) w_ DTA comments

Kelly, I thought I had sent you this yesterday, but can't find where I did. I'm emailing it now, although I understand that you are not open this afternoon. I'm also mailing the hard copy (marked up) with the Approval form signed by me. If you need it signed by our president, let me know and I'll get him to sign one when he returns from vacation on Wednesday or Thursday.

Dan Wagoner
Superintendent
Engineering/Maintenance
Dominion Terminal Associates
P.O. Box 967-A
Newport News, VA 23607
757-245-2275 Ext 305
Cell: 757-897-8670

STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE

This permit supersedes your permit dated September 13, 2004.

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

Dominion Terminal Associates
PO Box 967-A
Newport News, VA 23607
Registration No.: 60997

is authorized to construct and operate

a coal, petroleum coke and limestone receiving, storage and shipping facility

located at

Pier 11, Harbor Road
Newport News, Virginia

in accordance with the Conditions of this permit.

Approved on DRAFT.

Maria R. Nold, Deputy Regional Director

Permit consists of 10 pages.
Permit Conditions 1 to 39.

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INTRODUCTION

1. This permit approval is based on the permit application dated August 17, 1981, October 15, 2002 and May 8, 2004 including amendment information dated August 25, 1981, October 19, 1989, April 22, 1992, December 11, 2002, July 13, 2004 and April 3, 2006. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.

   Words or terms used in this permit shall have meanings as provided in 9 VAC 5-10-10 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses () after each condition.

   Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact.

   The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, § 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

PROCESS REQUIREMENTS

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2. **Equipment List** - Equipment at this facility consists of the following:

Equipment to be constructed:			
Reference No.	**Equipment Description**	**Rated Capacity**	**Air Pollution Control(s)**
UL-1	Marine vessel grab unloader	2000 tons/hr	Enclosed grab
UL-2	Marine vessel grab unloader	2000 tons/hr	Enclosed grab
BH-1	Ship unload hopper	3400 tons/hr	Fabric filter (DC-2)
BH-2	Ship unload hopper	3400 tons/hr	Fabric filter (DC-3)
BC-14	Ship unload conveyor	6800 tons/hr	Fully enclosed
BC-15	Ship unload conveyor	6800 tons/hr	Fully enclosed
Equipment permitted prior to the date of this permit:			
RD-1	Tandem rotary rail car dumper	5800 tons/hr	Enclosed bldg. with water spray
BS-1	Surge silo	1000 tons	Fabric filter (DC-1)
BS-2	Surge silo	3800 tons	Fabric filter (DC-5)
BS-3	Surge silo	4100 tons	Fabric filter (DC-6)
BC-1 through BC-13	Various coal handling and storage conveyors	Largest belt 6800 tons/hr	All fully enclosed (except 4, 7 and 13 – yard belts)
S/R-1 & S/R-2	Two (2) rotary stacker/reclaimers	5900 tons/hr stacking, 6500 tons/hr reclaim	Wet suppression
S/R-3	Rotary reclaimer	6800 tons/hr reclaim only	Wet suppression
OS-1 through OS-4	Coal, coke and limestone storage piles	Up to 350,00 tons	Wet suppression system (computerized)
SL-1	Ship/barge loader	6800 tons/hr	Wet suppression, telescoping loading chutes

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Specifications included in the permit under this Condition are for informational purposes only and do not form enforceable terms or conditions of the permit.
(9 VAC 80-1180 D 3)

3. **Emission Controls -** Particulate emissions from each marine vessel grab unloader (UL-1 and UL-2) shall be controlled by using closed grab buckets. The grab buckets shall be completely closed during movement of material from marine vessels to receiving hoppers.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

Comment: "Enclosed" gives the impression that the grabs are in a separate enclosure.
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4. **Emission Controls -** Particulate emissions from each marine vessel unloading hopper (BH-1 and BH-2) shall be controlled by a fabric filter (DC-2 and DC-3). The fabric filters shall be provided with adequate access for inspection.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

5. **Emission Controls -** Particulate emissions from the enclosed rotary rail car dumper building (RD-1) shall be controlled by wet suppression, which, if necessary, shall include the use of a surfactant. The surfactant to water ratio shall be in accordance with the manufacturer's recommendations. The minimum amount of water applied shall be 130 gallons per tandem dump. Compliance shall be achieved if there are no visible emissions.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

Comment: To match item #17

6. **Emission Controls -** Particulate emissions from the transfer points and stacker/reclaimers (S/R-1, 2 and 3) shall be controlled by wet suppression as necessary and by wet suppression with surfactant as necessary. Continuous wetting is not mandatory.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

7. **Emission Controls -** Particulate emissions from the conveyor system shall be controlled by conveyor hoods and wind guards. Ground level reclaim conveyor belts shall be controlled by wet suppression as necessary.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

8. **Fugitive Dust Emission Controls** – Fugitive dust emissions from the storage piles shall be controlled by a wet suppression system capable of wetting the entire storage area. Wet suppression cycles shall be implemented in accordance with Appendix A. Each cycle shall consist of no less than 35,500 gallons of water and, with assistance from other equipment, attain 100 percent coverage of the storage area. The wet suppression system shall be provided with adequate access for inspection.
(9 VAC 5-50-90, 9 VAC 5- 80-1180 and 9 VAC 5-50-260)

Comment: 100% coverage is not always possible by rainbird sprays alone with wind and other factors.

9. **Fugitive Dust Emission Controls** – All storage piles shall be truncated, stacker/reclaimers used to build flat top piles, and the top compacted to minimize fugitive emissions.
(9 VAC 5-50-90, 9 VAC 5- 80-1180 and 9 VAC 5-50-260)

Comment: Could we just say "Peaks on piles shall be avoided to minimize fugitive emissions."?

10. **Emission Controls** – Wet suppression shall be applied as necessary to all incoming loaded railcars located within facility boundaries if they are not to be dumped within 24 hours.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

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11. **Emission Controls** – Work areas shall be monitored and wet suppression applied as necessary to control emissions while operating a piece of auxiliary handling equipment (e.g., front end loader, bulldozer, etc.). (9 VAC 5-80-1180 and 9 VAC 5-50-260)

12. **Emission Controls** – Wet suppression shall be utilized when operating a particular piece of handling equipment (e.g., a dumper, a conveyor, etc.), unless the use of such controls would cause a safety hazard or damage to the equipment from freezing.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

13. **Emission Controls** – Particulate emissions from each surge silo (BS-1, BS-2 and BS-3) shall be controlled by a fabric filter (DC-1, DC-5 and DC-6). The fabric filters shall be provided with adequate access for inspection.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

14. **Monitoring – Marine Vessel Unloading Hoppers** – Once per ship, within the initial 2 hours after unloading begins, the permittee shall observe the baghouse fan motor amperage for the marine vessel unloading hoppers (BH-1 and BH-2). An acceptable range shall be established that reflects good air pollution control practice. An observation outside the acceptable range shall indicate the need for corrective action. The permittee shall maintain a log of the date, time, location, name of person performing the observation, the motor amperage reading, whether or not visible emissions were detected, and any corrective actions taken, if necessary. These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-1180 and 9 VAC 5-50-20)

15. **Monitoring – Fabric Filters** – Once per day, when in operation, the exhaust from each surge silo fabric filter (DC-1, DC-5 and DC-6) shall be observed by the permittee for a period of no less than one minute for the presence of visible emissions. If visible emissions are observed, the permittee shall perform corrective actions to eliminate the cause of the visible emissions. The permittee shall maintain a log of the date, time, location, name of person performing the observation, whether or not visible emissions were detected, and any corrective actions taken, if necessary. These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-1180 D, 9 VAC 5-50-20 C and 9 VAC 5-50-260)

Deleted: Once per day, during normal operations

16. **Monitoring – Fabric Filters** – Once per day, when in operation, the exhaust from each marine vessel unloading hopper fabric filter (DC-2 and DC-3) shall be observed by the permittee for a period of no less than one minute for the presence of visible emissions. If visible emissions are observed, the permittee shall perform corrective actions to eliminate the cause of the visible emissions. The permittee shall maintain a log of the date, time, location, name of person performing the observation, whether or not visible emissions were detected, and any corrective actions taken, if necessary. These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-1180 D, 9 VAC 5-50-20 C and 9 VAC 5-50-260)

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Comment: Attempting to make the frequency wording consistent between paragraphs 15, 16 and 17.

Deleted: Once per day, when operating

17. **Monitoring – Process Equipment** – Once per day, when in operation, particulate emissions from the marine vessel grab unloaders (UL-1 and UL-2), the enclosed rotary rail car dumper building (RD-1) and the conveyor systems shall be observed by the permittee for a period of no less than one minute for the presence of visible emissions. If visible emissions are observed, the permittee shall perform corrective actions to eliminate the cause of the visible emissions, if necessary. The permittee shall maintain a log of the date, time, location, name of person performing the observation, whether or not visible emissions were detected, and any corrective actions taken, if necessary. These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-1180 D, 9 VAC 5-50-20 C and 9 VAC 5-50-260)

18. **Wet Suppression System** – The wet suppression system for the storage piles shall be implemented as specified in Appendix A or by any other procedure as may be approved by the DEQ prior to use. Such approval shall be contingent on adequate documentation that any alternative procedure shall achieve at least as high an efficiency as Appendix A. This applies to all other dust control measures required by this permit. Request for changes in procedures shall be accompanied by an explanation of the proposed changes and the anticipated effect they shall have. These requests, if approved by the DEQ, shall be subject to a test and evaluation procedure prior to being accepted as permanent changes to the control procedures.
(9 VAC 5-50-260)

OPERATING LIMITATIONS

19. **Storage** – On a daily annual average basis, the maximum quantity of coal, petroleum coke and limestone (combined) in storage shall not exceed 1,100,000 tons, and at no time shall more than 1,400,000 tons of coal, petroleum coke and limestone (combined) be stored at the facility.
(9 VAC 5-80-1180)

20. **Throughput** - The throughput of coal/petroleum coke/limestone (combined), via rail and ship, shall not exceed 24,000,000 tons per year, calculated monthly as the sum of each consecutive 12-month period. No more than 10,000,000 tons per year of coal/petroleum coke/limestone (combined) shall be imported via ship. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-1180)

EMISSION LIMITS

21. **Emission Limits** – Particulate emissions from the operation of the coal/petroleum coke/limestone receiving, storage and shipping facility shall not exceed the limits specified below:

Particulate Matter (PM)	54.0 tons/yr
PM-10	9.7 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 3-20.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

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22. **Visible Emission Limit** – There shall be no detectable visible emissions from the enclosed rotary rail car dumper building (RD-1). Failure to meet this limitation due to the presence of water vapor shall not be a violation.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

23. **Visible Emission Limit** – There shall be no detectable visible emissions from any fabric filter exhaust stack (DC-1 – DC-6).
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

24. **Visible Emission Limit** - There shall be no detectable visible emissions from the conveyor belt transfer points. Failure to meet this limitation due to the presence of water vapor shall not be a violation.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

25. **Monitoring PM_{10}** – Dominion Terminal Associates shall install and operate a PM10 monitor at the Newport News Housing Authority Maintenance Building (180-J) to ascertain the ambient air quality in the area surrounding the coal/petroleum coke/limestone terminal. Operation shall be in accordance with Appendix J of 40 CFR Part 50.
(9 VAC 5-160-170)

26. **Control of Emissions** – The following actions are considered detrimental to the control of coal/petroleum coke/limestone emissions:
    a. Failure to stop any coal/petroleum coke/limestone movement operation when it becomes known that installed air pollution control systems are inoperative and would cause excess emissions.
    b. Failure to stop a coal/petroleum coke/limestone movement operation when it becomes known that the coal/petroleum coke/limestone handling equipment needed for that operation is malfunctioning or operating significantly below designated specifications.
    c. Failure of equipment operators to take immediate precautions to preclude fugitive dust emissions from the operation of bulldozers, front-end loaders, automobiles, or trucks (e.g., the use of water suppressant or limiting the speed of movement to below 10 miles per hour.)
    d. Failure of operational personnel to give precedence to designated personnel with the responsibility for controlling dust emissions.

    (9 VAC 5-80-1180 and 9 VAC 5-50-260)

RECORDS

27. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:

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    a. Annual throughput of coal/petroleum coke/limestone (combined), via rail and ship, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

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b. Annual throughput of imported coal/petroleum coke/limestone (combined), via ship, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

c. Records of visible emission observations for fabric filters (DC-1, DC-5 and DC-6) as required in Condition 15.

d. Records of visible emission observations for fabric filters (DC-2 and DC-3) as required in Condition 16

e. Records of visible emission observations for the process equipment as required in Condition 17.

f. Records of baghouse fan motor amperage measurement observations for the marine vessel unloading hoppers (BH-1 and BH-2) as required in Condition 14.

g. Records of PM10 monitoring operations as required by Appendix J of 40 CFR Part 50.

h. Maximum daily quantity of coal/petroleum coke/limestone (combined) in storage.

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i. Annual daily average of coal/petroleum coke/limestone (combined) in storage.

j. Records of dust control measures as required by Appendix A.

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These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-1180 and 9 VAC 5-50-50)

INITIAL COMPLIANCE DETERMINATION

28. **Visible Emissions Evaluation** – Initial performance test of Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall be conducted by the permittee on the marine vessel unloading operations. Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average. The details of the tests, including specific emission points, are to be arranged with the TRO Air Compliance Manager. The evaluation shall be performed to demonstrate compliance within 60 days after achieving the maximum production rate but in no event later than 180 days after start-up of the permitted facility. One copy of the test results shall be submitted to the TRO Air Compliance Manager within 45 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-50-30, 9 VAC 5-80-1200 and 9 VAC 5-50-410)

NOTIFICATIONS

29. **Initial Notifications** - The permittee shall furnish written notification to the Tidewater Regional Office of:

a. The actual date on which construction of the marine unloading facilities commenced within 30 days after such date.

b. The anticipated start-up date of the marine unloading facilities postmarked not more than 60 days nor less than 30 days prior to such date.

c. The actual start-up date of the marine unloading facilities within 15 days after such date.

d. The anticipated date of the VEE performance tests of the marine unloading facilities postmarked at least 30 days prior to such date.

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Copies of the written notification referenced in items a through d above are to be sent to:

Associate Director
Office of Air Enforcement (3AP10)
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029]

(9 VAC 5-50-50 and 9 VAC 5-80-1180)

GENERAL CONDITIONS

30. **Permit Invalidation** – The portions of this permit regarding construction of the marine unloading facilities shall become invalid, unless an extension is granted by the DEQ, if:

    a. A program of continuous construction is not commenced within the latest of the following:

        i. 18 months from the date of this permit;

        ii. Nine months from the date that the last permit or other authorization was issued from any other governmental entity;

        iii. Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or

    b. A program of construction is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.

(9 VAC 5-80-1210)

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31. **Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:

    a. Knowingly makes material misstatements in the permit application or any amendments to it;

    b. Fails to comply with the conditions of this permit;

    c. Fails to comply with any emission standards applicable to a permitted emissions unit;

    d. Causes emissions from the stationary source which result in violations of , or interfere with the attainment and maintenance of, any ambient air quality standard; or

    e. Fails to operate in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect at the time an application for this permit is submitted.

(9 VAC 5-80-1210 F)

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32. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:

    a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;

    b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;

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c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and

d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.
(9 VAC 5-170-130 and 9 VAC 5-80-1180)

33. **Maintenance/Operating Procedures** – At all times, including periods of start-up, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

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During each shift, one designated person shall be responsible for compliance with the procedures of Appendix A. Actions required in support of these procedures shall take precedence over routine coal, petroleum coke and limestone handling procedures. The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices and process equipment which affect such emissions:

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a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

b. Maintain an inventory of spare parts.

c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures, prior to their first operation of such equipment. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
(9 VAC 5-50-20 E and 9 VAC 5-80-1180 D)

34. **Record of Malfunctions** – The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the date, time, duration, description (emission unit, pollutant affected, cause), corrective action, preventive measures taken and name of person generating the record.
(9VAC 5-20-180 J and 9 VAC 5-80-1180 D)

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35. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Director, Tidewater Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone, telegraph or other electronic communication. Such notification shall be made as soon as practicable but no later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Director, Tidewater Regional Office.
(9 VAC 5-20-180 C and 9 VAC 5-80-1180)

36. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.
(9 VAC 5-20-180 I and 9 VAC 5-80-1180)

37. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, Tidewater Regional Office of the change of ownership within 30 days of the transfer.
(9 VAC 5-80-1240)

38. **Registration/Update** – Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to request by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, § 2.1-340 through 2.1-348 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.
(9 VAC 5-170-60 and 9 VAC 5-20-160)

39. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.
(9 VAC 5-80-1180)

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APPENDIX A

This appendix is to be considered a part of the Department of Environmental Quality permit to operate the Dominion Terminal Associates (Dominion) coal/petroleum coke/limestone terminal. All procedures outlined in this appendix are enforceable as a condition of operating.

Dominion shall record the following parameters on an hourly basis:

Average hourly temperature (T) in degrees Fahrenheit

Average hourly relative humidity (RH)

Average hourly wind speed in miles per hour (WS)

Average hourly wind direction (DIR)

Hourly rain in inches

Hourly occurrence of fog (visibility of 4 miles or less)

Density of air ρ (lb/ft^3) from the equation $\rho = -0.0001478(T) + 0.0853$

Viscosity of air (1.68μ lb/ft-hr) from the following equations

$-24.88 < T \leq 32$	$1.68\mu = 0.0001207(T) + 0.0655479$
$32.00 < T \leq 64.40$	$1.68\mu = 0.0001493(T) + 0.0646353$
$64.40 < T \leq 104$	$1.68\mu = 0.0001344(T) + 0.0655899$

K as determined by the equation: $K = WS(T/RH)\ (\rho/\mu\ 1.68)$

Dominion shall use the data listed above for a computerized spreadsheet in a format as described below, maintaining the records to be submitted to the Board upon request.

The program outlined in Appendix A when properly programmed will provide for an hourly visual display (graph) which depicts the following:

a. CE_{unc} for the KT predicted: will change by the new hourly prediction of KT. At the end of the day will represent the potential uncontrolled coal and petroleum coke emissions experienced in the past 24 hours.

b. Slope of the uncontrolled intended movement with time for the PASS-1 system without controls: will change by the new hourly prediction of KT.

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c. PASS-1 line, with hourly markings in proportion depicting the controlled to the hourly K, emission level attained when controls are applied. This line's slope and value will vary as suppression cycles are applied. The extension of this line depicts the near low end of the day value in $\mu g/m^3$, if no further cycles are applied and is the primary control medium. It generates from the uncontrolled slope line (b.).

d. PASS-0 line, depicting the controlled emissions level attained when controls are applied. This line's slope as in (c) will vary as suppression cycles are applied. The extension of this line depicts the near high end of the day value in $\mu g/m^3$, if no further cycles are applied. When, due to cycles, the PASS-0 line and the PASS-1 line are one and the same, their extension will be the end of the day value attained for coal and petroleum coke emissions in $\mu g/m^3$. It generates from the uncontrolled CE_{unc} line (a.).

e. PASS-0 (180) line, with hourly markings in proportions to the hourly K, depicting the controlled emission level when the wind direction is between 180° and 270°T. This line is activated by wind direction inputs and holds the last highest value during periods when the wind is out of quadrant. Its extension represents the near end of day value in $\mu g/m^3$ at station 180-J if no further cycles are applied. This line also generates from the uncontrolled CE_{unc} line (a.).

COLUMN 1

TM Records the hourly values for a 24 hour day, beginning with a 1 at 0100 hours and ending with a 24 at 2400 hours.

COLUMN 2

K Computes and records the hourly value of K as follows:

$$K = ((WS * TEMP) / RH) * (\rho/1.68\mu)$$

COLUMN 3

KD Computes and records the K factor adjusted for rain and freeze effects. KD is used to define the need for a cycle (C_i) administered by the computer controlled water suppression system. KD is computed as follows:

$$KD = K * F_{ir}$$

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COLUMN 4

C_i Records the total number of cycles credited on the hour. A 20-minute suppression cycle (35,500 gallons of water) sprayed from the computer controlled water suppression system counts as one cycle as well as a rain event greater than or equal to 0.0225 inches. Rain greater than or equal to 0.01 inches but less than 0.0225 inches is counted as one C_i if the adjusted rain amount for the hour is less than the actual rain amount.

COLUMN 5

SYM Records the type of suppression cycle credited for the hour. Where:

A: represents an ASSURANCE CYCLE (one 20-minute spray cycle per hour from the computer controlled water suppression system).

F: represents a continuous cycle (three 20-minute spray cycles per hour) administered to recover from a freeze event.

R: represents a rain event credited as a cycle.

1: represents a DEMAND I cycle, where KD is greater than or equal to 10, but less than 15.

2: represents a DEMAND II cycle, where KD is greater than or equal to 15, but less than 30.

3: represents a DEMAND III cycle, where KD is greater than or equal to 30, but less than 45.

4: represents a DEMAND IV cycle, where KD is greater than or equal to 45.

COLUMN 6

$\sum C_i$ Records the total number of cycles credited since 0100 or the sum of COLUMN 4.

COLUMN 7

IR Records the amount of rain in inches for the hour as measured by the rain gauge.

Note: CIR, the total amount of rain credited for the hour is computed as follows:

CIR = IR if it is raining, but adds 0.0225 to IR if a DEMAND IV RBC is administered.

IRadj, the adjusted rain amount for the hour is also computed to include the effects of non-consecutive rains, where:

$IRadj = CIR_{n-1} / (HRS_{n-1} + 1)$ when IR > 0 and HRS > 0

$IRadj = SUMIR_{n-1} / (HRS_{n-1} + 1)$ when IR > 0, SUMIR ≥ 0.0225; and HRS = 0

IRadj = 0 when IR = 0, and SUMIR < 0.0225

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COLUMN 8

HRS Records the number of hours following a rainfall. HRS increases by one each hour after the rain ends, and continues to do so until another rain begins or until the effects of the rain are over ($F_r \geq 0.9$ or HRS = 48)

Note: If a DEMAND IV cycle is administered in order to recover from a freeze, HRS is initially set to 0.5 instead of 1.

HRS = 0		when $C_i = 3$ and $FIR_{n-1} = 0$ **or** $F_{frn-1} < 1$
HRS = 0		when IR > 0 and SUMIR > 0.0225
HRS = 0.5		when $C_i = 3$; $FIR_{n-1} > 0$;and $F_{frn-1} \geq 1$
$HRS = HRS_{n-1} + 1$		when IR > 0 and SUMIR ≤ 0.0225
	or	when IR = 0; SUMIR > 0.0225

Note: If TM = 24 and HRS < 48 and $F_r < 0.9$ then HRS and SUMIR are carried forward to the next day. If HRS = 48 or $F_r \geq 0.9$ the post rain effect has reached its limits. On the next hour, $F_r = 1$, HRS = 0, and SUMIR = 0.

COLUMN 9

SUMIR Computes and records the effective sum of the hourly rainfall as follows:

SUMIR = 0	when CIR = 0 and $SUMIR_{n-1} < 0.0225$
$SUMIR = SUMIR_{n-1}$	when CIR = 0 and $SUMIR_{n-1} \geq 0.0225$
SUMIR = CIR	when CIR > 0;$(IR + IR_{n-1}) < 0.0225$;and $F_{frn-1} = 1$
SUMIR = CIR	when CIR > 0; $(IR + IR_{n-1}) < 0.0225$ $F_{frn-1} < 1$; $CIR_{n-1} > 0$; and $C_i = 3$
$SUMIR = IR + SUMIR_{n-1}$	when CIR > 0'; $(IR + IR_{n-1}) < 0.0225$; $F_{frn-1} < 1$; $CIR_{n-1} > 0$; and $C_i < 3$
$SUMIR = IRadj_{n-1} + CIR$	when CIR > 0; $(IR + IR_{n-1}) < 0.0225$ $F_{frn-1} < 1$; $CIR_{n-1} = 0$;
$SUMIR = IRadj_{n-1} + CIR$	when CIR > 0; and $(IR + IR_{n-1}) \geq 0.0225$

Note: If $F_r = 1$ or HRS = 48 then SUMIR is set to zero the next hour.

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COLUMN 10

F_r Computes and records the post rain recovery factor. F_r ranges from zero to one, with F_r set to zero during a rain. When $F_r \geq 0.9$, the effects of the rain are considered over, and F_r is set to one on the next hour. F_r is computed as follows:

$F_r = 0$ when CIR < 0.0225 and SUMIR ≥ 0.0225

$F_r = 1$ when CIR < 0.0225 and SUMIR < 0.0225

$F_r = 10^{(-215.66*24*SUMIR/(HRS*KT))}$ when CIR < 0.0225 and SUMIR < 0.0225

COLUMN 11

F_{fr} Computes and records the combined effects of rain and freeze, where $F_{fr} = F_r * F_f$.

F_f (the post freeze effect) is calculated as follows:

$F_f = ((SUMKF * FHRS)/(FIR * 106)) * 4.02917 + 0.305$ when FIR > 0 and SUMKF > 0

$F_f = 1$ when FIR = 0 or SUMKF = 0

SUMKF (the sum of the freeze shear) is calculated by summing the K values beginning when the temperature reaches 29°F until $F_r \leq 0.1$ or until continuous cycles are administered.

FIR (the potential freeze water) is calculated as follows:

FIR = SUMKF/19200 when FIR_{n-1} = 0;SUMIR = 0;FHRS = 8; and SUMKF > 0

FIR = FIR_{n-1} when FIR_{n-1} = 0; SUMIR = 0; FHRS ≠ 8 and SUMKF > 0

or when FIR_{n-1} > 10; F_r = 1; and SUMIR + $SUMIR_{n-1} \leq FIR_{n-1}$

FIR = SUMIR for all other conditions

FHRS (the potential freeze hours) is calculated as follows:

FHRS = 0 when SUMIR = 0 and SUMKF = 0

FHRS = HRS when SUMIR > 0 and SUMKF = 0

FHRS = HRS when SUMKF > 0; TEMP > 34°F; and F_r < 0.1

FHRS = FHRS + 1 when SUMKF > 0; and TEMP ≤ 34°F **or** $F_r \geq 0.1$

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COLUMN 12

KT Computes and records the predicted sum of K at the end of the day as follows:

$KT_n = K_1 + K_2 + K_3 + \ldots K_n + K_n(24\text{-}TM)$

EXAMPLE:	TM	K
	1	10
	2	10
	3	20

$KT_3 = 10 + 10 + 20 + 20(24\text{-}3) = 460$

COLUMN 13

H_{vi} Computes and records the estimated amount of dust entering the HVS during the hour as follows:

$H_{vi} = Ksum * Sl * F_{fr}$

where:

Ksum is the sum of the K values within the current cycle set.

Sl is the slope of the sumH_{vi} line for the current cycle set, and is computed as follows:

At TM = 1

$Sl = sb$ when $C_i = 0$

where sb(base slope) = CE_{unt}/KT

$Sl = sb * (1\text{-}eff)$ when $C_i > 0$

For all other times (n):

$Sl = Sl_{cin-1} * (1\text{-}eff)_n$

where Sl_{ci-1} is the last value of Sl in the previous C_i sequence Sl_{ci-1} = sb prior to any cycles.

(1-eff) term calculates the efficiency of the last cycle administered and is calculated as follows:

Equation A:

$(1\text{-}eff)_a = (1\text{-}(36.657299 * 10^{(-0.00189215 * Ksum)}/100))C_{seq}$

Equation B:

$(1\text{-}eff)_b = (1\text{-}((-0.0146913 * Ksum + 14.65059)/100))C_{seq}$

Equation A can be used to calculate the efficiencies when KT < 288 otherwise use Equation B until $slope_{n-1} * (1\text{-}eff)_b \leq$ sp(shift point)

where sp = 0.6256838 - 0.0008297 * KT

then switch to Equation A.

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Note: At the beginning of the day, (1-eff) = 1 until a cycle occurs. If a cycle is credited at time 1 (cycle performed at TM 0000) then the equation for (1-eff) changes as follows: KT replaces Ksum, and the calculation is multiplied by C_{seq} instead of raised to its power. The slope then remains constant until another cycle/cycles are administered.

C_{seq} is the cycle sequence for the current cycle set.

where: $C_{seq} = 0$	when $C_i = 0$
$C_{seq} = C_{seqn-1}$	when $C_{in} = C_{in-1}$
$C_{seq} = 0.5$	when $C_{in} > C_{in-1}$; $F_{fr} > 1$; and $C_i = 1$
$C_{seq} = 1$	when $C_i = 1$ or 3
$C_{seq} = 2$	when $C_i = 2$

EXAMPLE: KT(at TM = 4) = 368.60 i.e. ≥ 288

sb = 0.40804

sp = 0.31986

TM	K	RBC	Ksum	(1-eff)	C_{seq}	SI	F_{fr}	H_{vi}
1	20.10	0	20.10	1.0	0	0.408	1.0	8.2024
2	17.00	0	37.10	1.0	0	0.408	1.0	15.1398
3	16.50	1	16.50	0.85592	1	0.349	1.0	15.7631
4	15.00	1	31.50	0.85592	1	0.350	1.0	11.0307

COLUMN 14

$\sum H_{vi}$ Computes and records the sum of the coal and petroleum coke dust in the HVS (Hi Vol Sampler) to the hour as follows:

$$\sum H_{vi} = H_{vi} + \sum H_{vicin-1}$$

where $\sum H_{vicin-1}$ is the last value of $\sum H_{vi}$ in the previous cycle sequence.

EXAMPLE: Using the values from the previous example:

TM	$\sum H_{vicin-1}$	$\sum H_{vi}$
1	0.0	8.2024
2	0.0	15.1398
3	15.1398	20.9029
4	15.1398	26.1705

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COLUMN 15

HVT Computes and records the projected amount of dust on the HVS filter at the end of the day if no further cycles were administered.

$$HVT = \sum H_{vi} + KL * Sl * (1\text{-eff})$$

where $KL = KT - sum(K_1 + K_2 + \ldots K_n)$

(1-eff) is the same as COLUMN 14 except that KL is used in the expression instead of Ksum.

COLUMN 16

TEMP Records the temperature in degrees Fahrenheit.

COLUMN 17

RH Records the relative humidity (percent)

COLUMN 18

WD Records the wind direction (degrees)

COLUMN 19

WS Records the wind speed (mi/hr)

COLUMN 20

$\#C_c$ Records the number of suppression cycles credited for hour. The suppression cycles are only credited when the wind is blowing within the 180 to 270 degree quadrant.

COLUMN 21

$\sum HVIc$ Computes and records the sum of the dust in the HiVol accumulated when the wind is blowing within the 180 to 270 degree quadrant.

SOURCE TESTING REPORT FORMAT

Report Cover
- Plant name and location
- Units tested at source (indicate Ref. No. used by source in permit or registration)
- Test Dates.
- Tester; name, address and report date

Certification
- Signed by team leader/certified observer (include certification date)
- Signed by responsible company official
- *Signed by reviewer

Copy of approved test protocol

Summary
- Reason for testing
- Test dates
- Identification of unit tested & the maximum rated capacity
- *For each emission unit, a table showing:
  - Operating rate
  - Test Methods
  - Pollutants tested
  - Test results for each run and the run average
  - Pollutant standard or limit
- Summarized process and control equipment data for each run and the average, as required by the test protocol
- A statement that test was conducted in accordance with the test protocol or identification & discussion of deviations, including the likely impact on results
- Any other important information

Source Operation
- Description of process and control devices
- Process and control equipment flow diagram
- Sampling port location and dimensioned cross section Attached protocol includes: sketch of stack (elevation view) showing sampling port locations, upstream and downstream flow disturbances and their distances from ports; and a sketch of stack (plan view) showing sampling ports, ducts entering the stack and stack diameter or dimensions

Test Results
- Detailed test results for each run
- *Sample calculations
- *Description of collected samples, to include audits when applicable

Appendix
- *Raw production data
- *Raw field data
- *Laboratory reports
- *Chain of custody records for lab samples
- *Calibration procedures and results
- Project participants and titles
- Observers' names (industry and agency)
- Related correspondence
- Standard procedures

* Not applicable to visible emission evaluations

DRAFT PERMIT APPROVAL FORM

Department of Environmental Quality
Tidewater Regional Office
5636 Southern Blvd.
Virginia Beach, Virginia 23462

Instructions:

The "Draft Permit Approval Form" provides the owner or certified company official an opportunity to accept or suggest appropriate changes to a draft permit. If a signed form is not received within one (1) week of the date of receipt of the draft permit, DEQ will assume that the draft permit is considered acceptable and will proceed with processing the permit. **Please check the applicable statement(s) below after thoroughly reviewing the draft permit. Forms may be returned by facsimile to 757-518-2009, Attention:** Ms. Kelly M. Ryan or Ms. Jane A. Workman.

____ The owner or certified company official agrees with the conditions of the draft permit dated _____ . Please proceed to issue the permit with no change.

____ The owner or certified company official finds condition number(s) _____ of the draft permit dated _____ unacceptable.

__X__ The suggested changes are attached for your consideration.

Deleted:

____ The owner or certified company official requests further discussion with DEQ regarding the above referenced condition(s).

Signature: _____
Daniel R. Wagoner for Charles E. Brinley

Name: _____
Superintendent Engineering/Maintenance

Title: _____
Dominion Terminal Associates

Facility: _____
August 31, 2006

Date: _____

OCR

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

Ryan,Kelly

From: Dan Wagoner [dwagoner@dominionterminal.com]
Sent: Friday, September 01, 2006 2:42 PM
To: Ryan,Kelly
Subject: DTA draft (2) w- DTA comments

Kelly, I thought I had sent you this yesterday, but can't find where I did. I 'm emailing it now, although I understand that you are not open this afternoon. I'm also mailing the hard co py (marked up) with the Approval form signed by me. If you need it signed by our president, let me know and I' ll get him to sign one when he returns from vacation on Wednesday or Thursday.

ban Wagoner
Superintendent
Engineering/Maintenance
Dominion Terminal Associates
P.O. Box 967-A
Newport News, VA 23607
757-245-2275 Ext 305
Cell: 757-897-8670

STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE

This permit supersedes your pennit dated September 13, 2004.

In compliance with the Federal Clean Air Act and the Conunonwealth of Virginia Regulations for the
Control and Abatement of Air Pollution,

Dominion Terminal Associates
PO Box 967-A
Newport News, VA 23607
Registration No.: 60997

is authorized to construct and operate

a coal, petroleum coke and limestone receiving, storage and shipping facility

located at

Pier I 1, Harbor Road
Newport News, Virginia

in accordance with the Conditions of this per-rnit.

Approved on DR-AFT.

Maria R. Nold, Deputy Regional Director

Permit consists of 10 pages.
Pennit Conditions I to 39.

INTRODUCTION August 31, 2006

1 This permit approval is based on the permit application dated August 17, 198 1, October 15, 2002 and May 8, 2004 including amendment information dated August 25, 198 1, October 19, 1989, Apr-il 22, 1992, December I t, 2002, July 13, 2004 and April 3, 2006. Any changes in the pen-ait application specifications or any existing facilities which alter the impact of the facility on air quality may require a perinit. Failure to obtain such a permit prior to construction may result in enforcement action.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-1 0-10 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses (after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source ernissions data will necessitate a prompt response by the perinittee to requests by the DEQ or the Board for inforination to include, as appropriate: process and production data; changes in control equiprnent, and operating schedules. Such requests for infon-nation from the DEQ will either be in writing or by personal contact.

The availability of information submitted to the DEQ or the Board will be govemed by applicable provisions of the Freedom of Information Act, 2.2-3700 through 2.2-3714 of the Code of Virginia, 10. 1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations goveming confidentiality of such inforrnation.

fROCESS REQUIREMENTS -- Deleted;

2. Equipnient List - Equipment at this facility consists of the following:

Equipment to be constructed:
Reference No. Equipment Description Rated Capacity Air Pollution Control(s)
UL- I rviarine vessel grab unloader 2000 tonshr Enclosed grab
UL-2 Marine vessel mb unloader 2000 tons/hr Enclosed grab
BH-t Ship unload hopper 3400 tonsthr Fabric filter (DC-2)
BH-2 Ship unload hopper 3400 tons/hr Fabric filter (DC-3)
BC-14 Ship unload conveyor 6800 tons,hr Fully enclosed
BC-15 Ship unload convevor 6800 tons/hr Fully enclosed
Equipment permitted p ior to the date of this permit:
RD-1 Tandem rotary rail car dumper 5800 tons/hr Enclosed bldg. widi water sprav
BS- I Surge silo 1000 tons Fabric filter (DC- I)
BS-2 Surge silo 3800 tons Fabfic f'ilter (DC-5)
BS-3 Surge silo 4 1 00 tons Fabr-ic filter (DC-6)
BC- I dirough BC- 1 3 Various coal handling and storage Largest belt 6800 tons!hr All fully enclosed (except 4, 7

conveyors and 13 - yard beIts)
S. R- I & S,-R-2 Two (2) rotarv stacker/reclaimers 5900 tonsihr stacking, Wet suppression
6500 tons/hr rcclaim
S/R-3 Rotary reclainier 6800 tons,,hr reclaim only Wet sup ression
OS- I through OS-4 Coal, coke and limestone storage Up to 350,00 tons Wet supp ression svstem
piles (coinputerized)
SL-1 Ship/barge loader 6800 tons,br Wet suppression, telescoping
loading chutes

Specifications included in the permit under this Condition are for information
al purposes only and do IIUL Deleted: August 31, 2006

form enforceable terrns or conditions of the permit.
(9 VAC 80-1 180 D 3)

3. Emission Controls - Particulate emissions from each inarine vessel grab unl
oader (UL- I and UL-2) shall be
controlled by usingilosed grab buckets. The aTab-buckets sh-all-be completely
closedduring movement-of Coniment: "Enc-lowd" gives the
material from marine vessels to receiving hoppers. impression that the grabs a
re in a sepwate
enclosure.
(9 VAC 5-80-1180 and 9 VAC 5-50-260) Deleted: en - - - 7

4. Emission Controls - Particulate emissions from each marine vessel unloading
 hopper (BH-1 and BH-2)
shall be controlled by a fabric filter (DC-2 and DC-3). The fabric filters sh
all be provided with adequate
access for inspection.
(9 VAC 5-80-1 1 80 and 9 VAC 5-50-260)

5. Emission Controls - Particulate emissions from the enclosed rotary rail car
 dumper building@ @P-l) shall ------ comrmnt: To ma
be controlled by wet suppression, which, if necessary, shalt include the use o
f a surfactant. The surfactant to
water ratio shall be in accordance with the manufacturer's recommendations. T
he minimum amount of
water applied shall be 130 gallons per tandem dump. Compliance shall be achie
ved if there are no visible
emissions.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

6. Emission Controls - Particulate emissions from the transfer points and stac
ker/reclaimers (S/R-1, 2 and 3)
shall be controlled by wet suppression as necessary and by wet suppression wit
h surfactant as necessary.
Continuous wetting is not mandatory.
(1) VAC 5-80-1 1 80 and 9 VAC 5-50-260)

7. Emission Controls - Particulate emissions from the conveyor system shall be
 controlled by conveyor hoods
and wind guards. Ground level reclaim conveyor belts shall be controlled by w
et suppression as necessary.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

8. Fugitive Dust Emission Controls - Fugitive dust emissions from the storage
piles shall be controlled by a
wet suppression system capable of wetting the entire storage area. Wet suppre
ssion cycles shall be
implemented in accordance with Appendix A. Each cycle shall consist of no less
 than 35,500 gallons of
water and, with assistance from other equipment, attain 100 percent coverage@
of the stor i t
a.ze area. The wet comimn I 001' coverage is not
. . . . . always possible by rainbird sprays alone
suppression system shall be provided with adequate access for inspection. with
 wind and other factors.
(.9 VAC 5-50-90, 9 VAC 5- 80-1180 and 9 VAC 5-50-260)

1). 'Fugitive Dust Emission Controls - All storage piles shall be truncated, s
tacker/reclaimers used to build flat
toR piles, atid -the top coTI)acted tominimize fugitive -emissions -- - - - -
- -Comneent, Could we just
 say "Peaks
on piles shall be avoided to tninimize
(9 VAC 5-50-90,9 VAC 5- 80-1180 and 9 VAC 5-50-260) 1 filgitwe emissions."?

10. Emission Controls - Wet suppression shall be applied as necessary to all
incoming loaded raitcars located
within facility boundaries if they are not to be dumped within 24 hours.
(9 VAC 5-80-1 1 80 and 9 VAC 5-50-260)

11. Emission Controls - Work areas shall be monitored and wet suppression appl ied as necessaty to control Deleted: Augwt 31. 2000

emissions while operating a piece of auxiliary handling equipment (e.g., front end loader, bulldozer, etc.).
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

12. Emission Controls - Wet suppression shall be utilized when operating a par ticular piece of handiing
equipment (e.g., a dumper, a conveyor, etc.), unless the use of such controls would cause a safety hazard or
damage to the equipment from freezing.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

13. Emission Controls - Particulate emissions from each surge silo (BS-], BS-2 and BS-3) shall be controlled
bv a fabric filter (DC-1, DC-5 and DC-6). The fabiic filters shall be provide d with adequate access for
inspection.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

14. Monitoring - Marine Vessel Unloading Hoppers - Once per ship, within the i nitial 2 hours after
unloading begins, the per-mittee shall obser-ve the baghouse fan motor amperag e for the marine vessel
unloading hoppers (BH-1 and BH-2). An acceptable range shall be established t hat reflects good air
pollution control practice. An observation outside the acceptable range shall indicate the need for corrective
action. The permittee shall maintain a log of the date, time, location, name of person performing the
observation, the motor amperage reading, whether or not visible emissions were detected, and any
corrective actions taken, if necessary. These records shall be availabte for inspection by the DEQ and shall
be current for the most recent five years.
(9 VAC 5-80-1180 and 9 VAC 5-50-20)

15. Monitoring - Fabric Filters - Once per day, when in operatior@ the-exhatis t from each surge silofiabric - - - - - - -Deleted: Once per day, during norin al
filter (DC-1, DC-5 and DC-6) shall be observed by the per-mittee for a period of no less than one minute for operations

the presence of visible emissions. If visible emissions are observed, the per mittee shall perform corrective
actions to eliminate the cause of the visible emissions. The per-mittee shall maintain a log of the date, time,
location, name of person performing the observation, whether or iiot visible e missions were detected, and
any corrective actions taken, if necessary. These records shall be available for inspection by the DEQ and
shall be current for the most recent five years.
(9 VAC 5-80-1180 D, 9 VAC 5-50-20 C and 9 VAC 5-50-260)

16. Nlonitoring - Fabric Filters - Once per day, when in operation, the exhaus t from each marine vessel
unloading hopper fabric filter (DC-2 and DC-3) shall be observed by the permit tee for a period of no less
than one minute for the presence of visible emissions. [f visible emissions ar e observed, the pennittee shall

perform corrective actions to eliminate the cause of the visible emissions. T
he permittee shall maintain a
log of the date, time, location, name of person performing the observation, wh
ether or not visible emissions
were detected, and any corrective actions taken, if iiecessary. These records
shall be available for inspection
by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-1 1 80 D, 9 VAC 5-50-20 C and 9 VAC 5-50-260)

17. Monitoring - Process Equipment - Once per day, when in operationj particul ate emissions from the Deleted: August 31, 2006
- inent: Attempting to nuke the
mafine vessel grab unloaders (UL-1 and UL-2), the enclosed rotary rail car dum per building (RD-1) arid the frequency wording consistent bem-een
conveyor systems shall be observed by the permittee for a period of no less th an one minute for the presence paragraphs 15, 16 and 17.
of visible emissions. If visible emissions are observed, the pennittee shall p erform corrective actions to eted: Once per day, when operating
eliminate the cause of the visible emissions, if necessary. The permittee sha ll maintaiii a log of the date,
time, location, name of person performing the observation, whether or not visi ble emissions were detected,
and any corrective actions taken, if necessary. These records shall be availa ble for inspection by the DEQ
and shall be current for the most recent five years.
(9 VAC 5-80-1180 D, 9 VAC 5-50-20 C and 9 VAC 5-50-260)

18. Wet Suppression System - The wet suppression system for the storage piles shall be implemented as
specified in Appendix A or by any other procedure as may be approved by the DE Q prior to use. Such
approval shall be contingent oii adequate documentation that any alteniative p rocedure shall achieve at leas-t
as high an efficiency as Appendix A. This applies to all other dust control me asures required by this permit.
Request for changes in procedures shall be accompanied by an explanation of th e proposed changes and the
anticipated effect they shall have. These requests, if approved by the DEQ, s hall be subject to a test and
evaluation procedure prior to being accepted as permanent changes to the contr ol procedures.
(9 VAC 5-50-260)

OPERATING LIMITATIONS

19. Storage - On a daily annual average basis, the maximum quantity of coal, p etroleum coke and limestone
(combined) in storage shall not exceed 1,100,000 tons, and at no time shall mo re than 1,400,000 tons of
coal, petroleum coke and limestone (combined) be stored at the facility.
(.9 VAC 5-80-1 1 80)

20. Throughput - The throughput of coal/petroleum coke/limestone (combined), v ia rail and ship, shall not
exceed 24,000,000 tons per year, calculated monthly as the sum of each consecu tive 12-month period. No
more than 10,000,000 tons per year of coal/petroieum coke/limestone (combined) shall be imported via
ship. Compliance for the consecutive 12-month period shall be demonstrated mo nthly by adding the total for
the most recently completed calendar month to the individual monthly totals fo r the preceding 1 1 months.
(9 VAC 5-80-1 1 80)

EMISSION LIMITS

21. Emission Limits - Particulate emissions from the operation of the coal/pet roleum coke/limestone receiving,
storage and shippinc, facility shall not exceed the litnits specified below:

Particulate Matter (PM) 54.0 tons/yr

PM-10 9.7 tons/yr

These emissiotis are derived from the estimated overall emission contribution from operating limits.
Exceedance of the operating limits may be considered credible evidence of the exceedance of emission
limits. Compliance with these emission limits may be determined as stated in Condition numbers 3-20.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

22. 'v'isible Emission Limit - There shall be no detectable visible emissions from the enclosed rotary rail car Deleted'. August 31,2(o"

dumper buildiiig (RD-1). Failure to meet this limitation due to the presence of water vapor shall not be a
violation.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

23. Visible Emission Limit - There shall be no detectable visible emissions fr om any fabric filter exhaust stack
(DC- I - DC-6).
(9 VAC 5-80-1 180 and 9 VAC 5-50-260)

24. Visible Emission Limit - There shall be no detectable visible emissions fr om the conveyor belt transfer
points. Failure to meet this limitation due to the presence of water vapor sh all not be a violation.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

25. Monitoring PMIO - Dominion Terminal Associates shall install and operate a PM I 0 monitor at the
Newport News Housing Authoiity Maintenance Building (I 80-J) to ascertain the ambient air quality in the
area surrounding the coal/petroleum coke/limestone terminal. Operation shall be in accordance with
Appendix J of 40 CFR Part 50.
(9 VAC 5-160-170)

26. Control of Emissions - The following actions are considered detrimental to the control of coal/petroleum
coke/limestone emissions:
a. Failure to stop any coal/petroleum coke/limestone movement operation when i t becomes Icnown that
installed air pollution control systems are inoperative and would cause excess emissions.
b. Failure to stop a coal/petroleum coke/limestone movement operation when it becomes known that the
coaUpetroleum coke/limestone handling equipment needed for that operation is m alfunctioning or
operating significantly below designated specifications.
c. Failure of equipment operators to take immediate precautions to preclude fu gitive dust emissions froin
the operation of bulldozers, front-end loaders, automobiles, or trucks (e.g., the Lise of water suppressant
or limiting the speed of movement to below 10 miles per hoiir.)
d. Failure of operational personnel to give precedence to designated personnel with the responsibility for
controlling dust emissions.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

RECORDS

217. On Site Records - The permittee shall maintain records of einission data and operating parameters as
necessary to demonstrate compliance with this permit. The content and format of such records shall be
arranged with the Director, Tidewater Regional Office. These records shall in clude, but are not limited to:
a. Aiinualthroughputofcoal/petroleumcoke/limestone(combined),viarailandship,ca lculatedmonthly '---iFormatted,.ButietsandNumbering
as the sum of each consecutive 12-month period. Compliance for the consecutiv

e 12-month period shall
be demonstrated monthly by addincy the total for the most recently completed c
alendar month to the
C,
individual monthly totals for the preceding I I months.

b. Annual throughput of imported coal/petroleum coke/limestone (combined), via ship, calculated monthly as the sum of each consecutive 12-month period, Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recentty completed calendar month to the individual monthly totals for the preceding I I months.

c. Records of visible emission observations for fabric Filters (DC-1, DC-5 and DC-6) as required in Condition 15.

d. Records of visible emission observations for fabric filters (DC-2 and DC-3) as required in Condition 16

e. Records of visible emission observations for the process equipment as required in Condition 17.

f. Records of baghouse fan motor amperage measurement observations for the marine vesset unloading hoppers (BH-1 and BH-2) as required in Condition 14.

g. Records of PM IO rnonitoring operations as required by Appendix J of 40 CFR Part 50.

h. Maximum daily quantity of coal/petroteum coke/limestone (combined) in storage. Formatted: Bullets and Numbering

i. Annual daily average of coaUpetroleum cokeitimestone (combined) in storage.

j. Records of dust control measures as required by Appendix A. Formatted: Bullets and Numbering

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-1180 and 9 VAC 5-50-50)

INITIAL COMPLIANCE DETERMINATION

28. Visible Emissions Evaluation - liiitial performance test of Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall be conducted by the permittee on the marine vessel unloading operations. Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average. The details of the tests, including specific emission points, are to be arranged with the TRO Air Compliance Manager. The evatuatiati shall be performed to demonstrate compliance within 60 days after achieving the maximum production rate but in no evetit later than 180 days after start-up of the permitted facility. One copy of the test results shall be submitted to the TRO Air Compliance Manager within 45 days after test completion and shall conforrn to the test report fonnat enclosed with this pen-nit.
(19 VAC 5-50-30, 9 VAC 5-80-1200 and 9 VAC 5-50-41 0)

NOTIFICATIONS

2(. [nitial Notifications - The permittee shall fumish written notiFication to the Tidewater Regional Office oP.

a. The actual date on which construction of the mafine unloading facilities co nu-nenced within 30 days
after such date.

b. The anticipated start-up date of the marine unloading facilities postmarked not more than 60 days nor
less than 30 days prior to such date.

c. The actual start-up date of the marine unloading facilities within 15 days after such date.

d. The anticipated date of the VEE performance tests of the marine untoading f acilities postmarked at least
30 davs prior to such date.

Copies of the written notification referenced in items a through d above are t
o be sent to: Deleted: A.y,.t 3i, 2N6

Associate Director
Office of Air Enforcement (3AP IO)
U.S. Environmental Protection Agency
Region III
1650 Arch Sti-eet
Philadelphia, PA 19103-2029]
(9 VAC 5-50-50 and 9 VAC 5-80-1 180)

GENERAL CONDITIONS

30. Permit Invalidation - The portions of this pennit regarding construction o
f the mafine unloading facilities
shall become invalid, unless an extension is granted by the DEQ, if-.

a. A program of continuous construction is not commenced within the latest of
the following:
Deleted:
i. 18 months from the date of this perrni@
---

ii. Nine months from the date that the last permit or other authofization was
issued ftom any other
govemmental entity;

iii. Nine months from the date of the last resolution of any litigation concem
ing any such permits or
authorization; or

b. AprogramofconstnictionisdiscontinuedforaperiodofiSmonthsormore,orisnoteompl
etedwithin
a reasonable time, except for a DEQ approved period between phases ofa phased
construction project.
(9 VAC 5-80-12 1 0)

31. Permit Suspension/Revocation - This permit may be suspended or revoked if
the permittee:

a. Knowingly makes material misstatements in the permit application or any ame
ndments to it;

b. Fails to comply with the conditions of this permit;

C. Fails to comply with any emission standards applicable to a permitted,ernis
sions uni@ Deleted: an
Deleted: induded in this perrnit
d. Causes emissions from the stationary source which resiilt in violations of,
 or interfere with the
attainment and maintenance of, any ambient air quality standard@ or

e. Fails to operate in conformance with any applicable control strategy, inclu
ding any emission standards
or ei-nission limitations, in the State Implementation Plan in effect at the t
ime an application for this
permit is submitted.
(Q VAC 5-80-12 1 0 F)

32. Right of Entry - The permittee shall allow authorized local, state, and fe
deral representatives, upon the

presentation of credentials:

a. To enter upon the permittee's premises on which the facility is located or in which any records are
required to be kept under the terms and conditions of this permit,

b. Tohaveaccesstoandcopyatreasonabletimesanvrecordsrequiredtobekeptundertheter msand
conditions of this permit or the State Air Pollution Control Board Regulations
,

c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of Deleted: August 31, 2006

this permit or the State Aii- Pollution Control Board Regulations; and

d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.
(9 VAC 5-170-130 and 9 VAC 5-80-1180)

33. Maintenance/Operating Procedures - At all times, including periods of start-up, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate@4e affect -ed source -- - - - - - - - - -Deleted: including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

During each shift, one designated person shall be responsible for compliance with the procedures of Appendix A. Actions required in support of these procedures shall take precedence over routine coal, petroteLIM coke and limestone handling procedures. The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipmen@ Trionitorin
- _g devices and process equ-ipment which-a-ffect-such eniissions: -Deleted:

a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

b. Maintaiii an inventory of spare parts.

c. Have available wfitten operating procedures for equipment. These procedures shall be based on the manufacturer's recomi-nendations, at a minimum.

d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures, prior to their first operation of such equipment. The permittee shall maintain records of the training provided including the names of trainees, the date of traininc, and the nature of the training.

Records of maintenance aiid traiiiing shall be maintained on site for a per-iod of five years and shall be made available to DEQ persorinel upon request.
(9 VAC 5-50-20 E and 9 VAC5-80-1180 D)

34. Record of Nlalfunctions - The permittee sliall maintain records of the occtuTence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the

date, time, duration,
description (emission unit, pollutant affected, cause), corrective action, pre
ventive measures taken aild name
of person generating the record.
((VAC 5-20-1 80 J and 9 VAC 5-80-1 1 80 D)

35. Notification for Facility or Control Equipment Malfunction - The permittee shall fumish notification to Deleted: August 3 1, -2006

the Director, Tidewater Regional Office of malfunctions of the affected facili ty or related air pollution control equipment that may cause excess emissions for more than one hour, by f acsimile transn-fission, telephone, telegraph or other electronic communication. Such notification sha ll be made as soon as practicable but no later than four daytime business hours after the malfunctio n is discovered. The perinittee shall provide a written statement giving all pertinent facts, including the es timated duration of the breakdown, within two weeks of discovery of the malfunction. When the coiidit ion causing the failure or malfunction has been corrected and the equipment is again in operation, the pe rmittee shall notify the Director, Tidewater Regional Office.
(9 VAC 5-20-1 80 C and 9 VAC 5-80-1 1 80)

36. Violation of Ambient Air Quality Standard - The permittee shall, upon requ est of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating an y primary ambient air quality standard and shall not return to normal operation until such time as the ambie nt air quality standard will not be violated.
(9 VAC 5-20-180 1 and 9 VAC 5-80-1180)

37. Change of Ownership - In the case of a transfer of ownership of a stationa r-y source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, Tidewater Regional Office of the change of ownership within 30 days of the tra nsfer.
(9 VAC 5-90-1240)

3 8. Registration/Update - Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to request by the DEQ or the Board for information to include, as appropriate: process and production data; changes i n control equipment; and operating schedules. Such requests for infor-mation from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board wi ll be govemed by applicable provisions of the Freedom of Information Act, 2.1-340 through 2.1-348 of the Code of Virginia, 10. I - 1314 (addressing information provided to the Board) of the Code of Virginia, a nd 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federa l officials is subject to appropriate federal law and regulations governing confidentiality of such info rmation.
(9 VAC 5-170-60 and 9 VAC 5-20-160)

39. Permit Copy - The permittee shall keep a copy of this permit on the premis es of the facility to which it applies.
(9 VAC 5-80-1 1,80)

APPENDIX A

This appendix is to be considered a part of the Department of Environmental Quality permit to operate
the Dominion Terminal Associates (Dominion) coal/petroleum coke/limestone terminal. All procedures
outlined in this appendix are enforceable as a condition of operating.

Don-Linion shall record the following parameters on an hourly basis:

Average hourly temperature (T) in degrees Fahrenheit

Average hourly relative humidity (RH)

Average hourly wind speed in miles per hour (WS)

Average hourly wind direction (DIR)

Hourly rain in inches

Hourly occurrence of fog (visibility of 4 miles or less)

Density of air p (lb/ft) from the equation p = -0.0001478(T) + 0.0853

Viscosity of air (1.68lt lbllft-hr) from the following equations

-24.88 < T < 32 1.68lt = 0.000 I 207(T) + 0.0655479
32.00 < T < 64.40 1.68@t = 0.0001493(T) + 0.0646353
64.40 < T < 104 1.68@t = 0.000 I 344(T) + 0.0655999

K as deter-mined by the equation: K @ WS(T/RH) (pll[t 1.68)

Dominion shal I use the data listed above for a computerized spreadsheet in a fonnat as described below,
maintaining the records to be submitted to the Board upon request.

The program outlined in Appendix A when properly programmed will provide for an hourly visual
display (graph) which depicts the following:

a. CEu,,, for the KT predicted: will change by the new hourly prediction of KT. At the end of the day will

represent the potential uncontrolled coal and petroleum coke emissions experienced in the past 24 hours.

b. Slope of the uncontrolled intended movement with time for the PASS-1 system without controls: will

change by the new hourly prediction of KT.

c. PASS-1 line, with hourly mark-inizs in proportion depicting the controlled to the hourly K, emission level

attained when controls are applie . This line's slope and value will vary as s uppression cycles -are applied.
3
The extension of this line depicts the near low end of the day value in ltg/m ,if no further cycles are applied

and is the primary control medium. It generates from the uncontrolled slope l ine (b.).

d. PASS-0 line, depictinp- the controlled emissions level attained when contro ls are applied. This fine's slope

as in (c) will vary as suppression cycles are applied. The extension of this line depicts the near high en of
3 -0 line and the
the day value in pg/m ,if no further cycles are applied. When, due to cycles, the PASS

PASS-1 line are one and the same, their extension will be the end of the day v alue attained for coal and
3
petroleum coke emissions in pg/ni . It generates fTom the uncontrolled CE,,,, line (a.).

e. PASS-0 G 80) line, with hourly markinps in proportions to the hourly K, dep icting the controlled emission

level when the wind direction is between 180' and 170'T. This line is activat ed by wind direction inputs

and holds the last highest value during periods when the wind is otit of quadr ant. Its extension represents

the near end of day value in l.Lg/rn3at station I SO-J if no further cycles ar e applied. This line aiso generates

from the uncontrolled CE,,,,, line (a.).

COL UNIN I
TM Records the hourly vaiLleS for a 24 hour day, beginning with a I at 0100 ho urs and ending with a 24 at

2400 hours.

COL UMN 2
K Computes and records the hourly value of K as follows:

K = ((WS * TEMP) / RH) * (p/1.68@t)

COL UyVfN 3
KD Computes and records the K factor adjusted for rain and freeze efTects. KD is used to define the need

for a cycle (Ci) administered by the computer controlled water suppression sys
tem. KD is computed as

follows:

KD @ K * F,:r

COL UA1N 4
C Records the total number of cycles credited on the hour. A 20-minute suppres sion cycle (35,500 gallons

of water) sprayed from the computer controlled water suppression system counts as one cycle as well as

a rain event greater than or equal to 0.0225 inches. Rain greater than or equ al to 0.01 inches but less

than 0.0225 inches is counted as one Ci if the adjusted rain amount for the ho ur is less than the actual

rain amount.

COL UAIN 5
SYM Records the type of suppression cycle credited for the hour. Where:

A: represents an ASSUR_ANCE CYCLE (one 20-minute spray cycle per hour from the computer

controlled water suppression system).

F: represents a continuous cycle (three 20-minute spray cycles per hour) admin istered to recover from a

freeze event.

R: represents a rain event credited as a cycle.

I : represents a DEMAND I cycle, where KD is greater than or equal to 10, but less than 15.

2: represents a DEMAND 11 cycle, where KD is greater than or equat to 15, but tess than 30.

3: represents a DEMAND III cycle, where KD is greater than or equal to 30, but less than 45.

4: represents a DEMAND IV cycte, where KD is greater than or equal to 45.

COLLlAfN 6
YCi Records the total number of cycles credited since 0100 or the sum of COLUM N 4.

COLUNIN 7
IR Records the amount of rain in inches for the hour as measured by the rain g auge.

Note: CIR,thetotalamountofraincreditedforthehouriscomputedasfotlows:

CIR=lRifitisraining,butaddsO.0225tolRifaDEMANDIVRBCisadministered.

IRaqi, the adjusted rain amount for the hour is also computed to inctude the e ffects of non-consecutive

rains, where:

I Radj = Cl Rr- I / (H RSn- 1 + I when IR > 0 and HRS > 0

fRadj = SUMIRn-I / (HRSn-1 + 1) when IR > 0, SUMIR > 0.0225; and HRS 0

IRadj = 0 when IR = 0, and SUMIR < 0.0225

COL UYN 8
HRS Records the number of hours following a rainfall. HRS increases by one eac h hour after the rain ends..

and continues to do so until another rain begins or until the effects of the r ain are over (F, > 0.9 or HRS

= 48)

Note: IfaDEMANDIVcycleisadministeredinordertorecoverfromafreeze,HRSisinitially setto

0.5 instead of 1.

HRS = 0 when Ci = 3 and FIR.-, = 0 or Ffm-l < I

HRS = 0 when IR > 0 and SUMIR > 0.0225

HRS = 0.5 when Ci = 3; FiRn-I > Oand Ffm-l > I

HRS = HRSn-I ` I when IR > 0 and SUMIR < 0.0225

or when IR = 0; SUMIR > 0.0225

Note: IfTM=24andHRS<48andFr<0.9thenHRSandSUMIRarecarriedforwardtothenext

day. If H RS = 48 or F, > 0.9 the post rain effect has reached its limits. On the next hour, F, 1, H RS

0, and SUMIR = 0.

COLLIA-fN 9
SUMIR Computes and records the effective sum of the hourly rainfall as follows :

SUMIR=O when CIR = 0 and SUMIRn-I < 0.0225

SLIMIR = SUMIR.-I when CIR = 0 and SUMIRj > 0.0225

SUMIR=CIR when CIR > 0;(IR + IR,,-,) < 0.0225;and Fft.-I = I

SLJMIR = CIR when CIR > 0: (IR + IR,,-1) < 0.0225 Frrn-I < 1;

Cl Rn-I > 0; and Ci = 3

SUMIR = IR + SUMIR.., when Cl R > O, (I R + I R,,_ 1) < 0.0225;

Ffm-l < 1; CIR,j > 0; and Ci < 3

SUMIR = lRadj,_1 4- CIR when CIR > 0; (IR + I R,_j) < 0.0225 Fft-I < 1;

C'l Rn- 1 = 0;

SUM I R = I Radjr_j + Cl R when CIR > 0; and (IR + IRn-1) > 0.0225

Note: If F, = I or HRS --- 48 then SUM I R is set to zero the next hour.

COLUA-fN 10
F, Computes and records the post rain recovery factor. F, ranges from zero to one, with Fr set to zero

during a rain. When Fr > 0.9, the effects of the rain are considered over, an d F, is set to one on the next

hour. Fr is computed as follows:

F, = 0 when CIR < 0.0225 and SLIM I R > 0.0225

F, = I when CIR < 0.0225 and SUMIR < 0.0225

Fr = lo(-215.66"-4'SLJNIIR/(HRSIKT)) when Cl R < 0.0225 and SLIMIR < 0.0225

COL UAfN II
Ffr Computes and records the combined effects of rain and freeze, where Ff, = F, * Ff.

Ff (the post freeze effect) is calculated as follows:

Ff = ((SUMKF * FHRS)/(FIR * 106)) * 4.02917 + 0.305 when FIR > 0 and SLIMKF > 0

Ff= I when FIR = 0 or SUMKF = 0

SUMKF (the sum of the freeze shear) is calculated by summing the K values begi nning when the

temperature reaches 29'F until F, < 0.1 or until continuous cycles are adminis tered.

FIR (the potential freeze water) is calculated as follows:

FIR = SUMKF/19200 when FIR.-, = O;SUMIR O;FHRS = 8, and SUMKF > 0

FIR = FIRn-I when FIRn-1 = 0; SUMIR O@ FHRS # 8 and SUMKF > 0

or when FIR.-, > 10; F, = 1; and SUMIR + SUMIRn-I < FIR,-,

FIR = SUMIR for all other conditions

FHRS (the potential freeze hours) is calculated as follows:

FHRS = 0 when SUMIR = 0 and SUMKF = 0

FHRS = HRS when SUMIR > 0 and SLJMKF = 0

FHRS = HRS when SUMKF > 0, TEMP > 347; and Fr < 0.1

FHRS = FHRS + 1 when SLJMKF > 0; and TEMP < 34'F or Fr > 0.1

COLLIAfN 12
KT Computes and records the predicted sum of K at the end of the day as follow s:

KT@ = K, + K, + K, + . . . Ktt + Kr(24-TM)

EXAMPLE: TM K

I 10

2 10

3 20

KT3 = 10 + 10 + 20 + 20(24-3) = 460

COLUAff 13
H,j Computes and records the estimated amount of dust entering the HVS during the hour as follows:

H,j = Ksum * SI * Ffr

where:

Ksum is the sum of the K values within the current cycle set.

SI is the slope of the SuMH,j line for the current cycle set, and is computed as follows:

At TM I

 SI sb when Ci = 0

where sb(base slope) = CE,m/KT

SI @ sb * O -eff) when Ci > 0

For all other times (n):

SI = SIcj,_i * (I -eff).

where Sici-I is the last value of SI in the previous Ci sequence SI,j.j = sb p rior to any cycles.

(1-eff) term calculates the efficiency of the last cycle administered and is c alculated as follows:

Equation A:

(I -eff), = (1-(36.657299 *I o(-0.00 1 89215 1 K,um)/ I 00))C",

Equation B:

(I -eff)b = (I -((-O.O 146913 * Ksum + 14.65059)/l 00))CSeq

Equation A can be used to calculate the efficiencies when KT < 288 otherwise u se Equation B until

slope,-, * (I-eff)b < sp(shift point)

where sp = 0.6256838 - 0.0008297 * KT

then switch to Equation A.

Note: At the begirining of the day, (1-eff) = 1 until a cycle occurs. If a cy cle is credited at time I

(cycle performed at TM 0000) then the equation for G-eff) changes as follows: KT replaces Ksum,

and the calculation is multiplied by C,,, instead of raised to its power. The slope then remains

constant until another cycle/cycles are administered.

Cseq is the cycle sequence for the current cycle set.

where: C,,q = 0 when Ci = 0

cseq = Cseqn- I when Cj@ = Ci@,-j

cseq = 0.5 when C@ > Cjj.j; Ff, > 1; and Ci I

cseq = I when Ci = I or 3

Cseq = 2 when Ci = 2

EXAMPLE: KT(at TM = 4) = 368.60 i.e. > 288

sb = 0.40804

sp = 0.31986

TM K RBC Ksum (I-eff) cseq Si F fr H,-j

1 20.10 0 20.10 1.0 0 0.408 1.0 8.2024

2 17.00 0 37.10 1.0 0 0.408 1.0 15.1398

3 16.50 1 16.50 0.85592 1 0.349 1.0 15.7631

4 15.00 1 31.50 0.85592 1 0.350 1.0 11.0307

COLLllvfN 14
Y-H,i Computes and records the sum of the coal and petroleum coke dust in the HVS (Hi Vol Sampler) to the

hour as follows:

YH,j = H,j + YH,icin-l

where YH,i,i,-, is the last value ofYH,i in the previous cycle sequence.

EXAMPLE: Using the values from the previous example:

TM Y-1-1,jein-1 Y-H,i

I 0.0 8.2024

2 0.0 15.1398

3 15.1398 20.9029

4 15.1398 26.1705

COLUA,IN 15
HVT Computes and records the projected amount of dust on the HVS filter at the end of the day if no further

cycles were administered.

HVT = Y-H,i + KL * SI * (I-eff)

where KL = KT - sum(Ki + K, +... K,)

(I-eff) is the same as COLUMN 14 except that KL is used in the expression inst ead of Ksum.

COLUjkfN 16
TEMP Records the temperature in degrees Fahrenheit.

COL LIA-ff 1 7
RH Records the relative humidity (percent.)

COLUA-fN 18
WD Records the wind direction (degrees)

COLLIA.-fN 19
WS Records the wind speed (mi/hr)

COLUA,fN20
#C, Records the number of suppression cycles credited for hour. The suppressio n cycles are only credited

when the wind is blowing within the ISO to 270 degree quadrant.

COLLIAIN 2 /
Y-HVic Computes and records the sum of the dust in the HiVol accumulated when the wind is blowing

witliin the 1 80 to 270 degree quadrant.

SOURCE TESTING REPORT FORNIAT

Report Cover
Plant name and location
Units tested at source (indicate Ref No. used by source in pennit or registrat ion)
Test Dates.
Tester; name, address and report date

Certification
Signed by team leader/certified observer (include certification date)
Signed by responsible company official
*Signed by reviewer

Copy of approved test protocol

Summary
Reason for testing
Test dates
Identification of unit tested & the maximum rated capacity
*For each emission unit, a table showing:
Operating rate
Test Methods
Pollutants tested
Test results for each run and the run average
Pollutant standard or limit
Summarized process and control equipment data for each run and the average, as required by the test
protocol
A statement that test was conducted in accordance with the test protocol or id entification &
discussion of deviations, including the likely impact on results
Any other important information

Source Operation
Description of process and control devices
Process and coiitrot equipment flow diagram
Sampling port location and dimensioned cross section Attached protocol include s: sketch of stack
(elevation view) showing sampling port locations, upstream and downstream flow disturbances and
their distances from ports, and a sketch of stack (plan view) showing sampling ports, ducts entefing
the stack and stack diameter or dimensions

Test Results
Detailed test results for each run
*Sample calculations
*Description of collected samples, to include audits when applicable

Appendix
*Raw production data
*Raw field data
*Laboratory reports
*Chain of custody records for lab samples
*Calibration procedures and results
Project participants and titles
Observers' names (industry and agency)
Related correspondence
Standard procedures

Not applicable to visible emission evaluations

DRAFT PERMIT APPROVAL FORNI

Department of Envirorimental Quality
Tidewater Regional Office
5636 Southem Blvd.
Virginia Beach, Virginia 23462

Instructions:

The "Draft Permit Approval Form" provides the owner or certified company offic ial an opportunity to
accept or suggest appropriate changes to a draft perinit. If a signed form is not received within one (1)
week of the date of receipt of the draft perrnit, DEQ will assume that the dra ft permit is considered
acceptable and will proceed with processing the pen-nit. Please check the app licable statement(s) below
after thoroup-hiy reviewing the draft permit. Forms may be returned by facsim ile to 757-518-2009
Attention: Ms. Kelly M. Ryan or Ms. Jane A. Workman.

The owner or certified company official agrees with the conditions of the draf t permit dated

. Please proceed to issue the perrnit with no change.

The owner or certified company official finds condition number(s)

of the draft permit dated unacceptable.

The suggested changesare attached for yourconsideration ---------- --------- Deleted:

The owner or certified company official requests further discussion with DEQ r egarding the
above referenced condition(s).

SivmltUre:
Daiiiel [Z. Waaoner for Charles E. Brinley

Name:
Superintendent Fri-ineeringAlaintenance

1-itle:
DorTliiiioii Terminal Associates

Facilitv:
ALlaust 31, 2006

Date: