Ryan,Kelly

From: Dan Wagoner [dwagoner@dominionterminal.com]
Sent: Thursday, August 17, 2006 4:19 PM
To: Ryan,Kelly
Subject: RE: draft permit

I would like to request an extension until September 1 to reply on the draft.

Thank you

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

From: Ryan,Kelly [mailto:kmryan@deq.virginia.gov]
Sent: Monday, August 14, 2006 2:27 PM
To: Dan Wagoner
Subject: draft permit

Hi Dan,

Please review the attached draft permit and return the Draft Permit Approval form to me by August 21, 2006. An extension may be granted if requested before August 21, 2006. If you have any questions, feel free to contact me.

Thanks,
Kelly

Kelly M. Ryan
Senior Environmental Engineer
Dept. of Environmental Quality
5636 Southern Blvd.
Virginia Beach, VA 23462
Phone: 757-518-2155
Fax: 757-518-2009
Email: kmryan@deq.virginia.gov

FACILITY COMMENTS

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.

Harold J. Winer, Deputy Regional Director

Permit consists of 10 pages.
Permit Conditions 1 to 38.

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
BH-2	Ship unload hopper	3400 tons/hr	Fabric filter
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
BS-2	Surge silo	3800 tons	Fabric filter
BS-3	Surge silo	4100 tons	Fabric filter
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

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 enclosed grab buckets. The grab buckets shall be completely closed during transfer of material from marine vessels to receiving hoppers.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

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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. The fabric filters shall be provided with adequate access for inspection.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

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5. **Emission Controls** - Particulate emissions from the enclosed rotary rail car dumper (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)

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 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)

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)

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)

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 shall be controlled by a fabric filter. 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** – The permittee shall measure the air velocity in or at the inlet of the duct that captures dust from the marine vessel unloading hoppers with a frequency of the lesser of once per week or once per vessel being unloaded. An acceptable velocity range shall be established that reflects good air pollution control practice. Once the velocity range has been established, the permittee shall measure and adjust as necessary on a monthly basis to ensure the collection system remains effective. The permittee shall maintain a log of the date, time, location, name of person performing the velocity measurements, 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** – After completion of initial performance testing on the marine vessel unloading hoppers, once per month, during normal operations, the exhaust from each fabric filter for the surge silos and marine vessel unloading hoppers 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 in excess of the emission limits specified in this permit,, the permittee shall perform corrective actions to eliminate the cause of the visible emissions and shall increase monitoring frequency to once per week. Once weekly monitoring is completed for a thirty (30) day period without observing excess visible emissions, the permittee may resume a monthly schedule of observations. 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)

16. **Monitoring – Process Equipment** – After completion of initial performance testing on the marine vessel grab unloaders (UL-1 and UL-2),once per month, during normal operations, particulate emissions from the marine vessel grab unloaders (UL-1 and UL-2), the enclosed rotary rail car dumper (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 in excess of the emission limits specified in this permit,, the permittee shall perform corrective actions to eliminate the cause of the visible emissions, if necessary, and shall increase monitoring frequency to once per week. Once weekly monitoring is completed for a thirty (30) day period without observing excess visible emissions, the permittee may resume a monthly schedule of observations. 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

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Comment: We assume that the purpose of this paragraph (14) is to ensure effectiveness of the hopper dust control and the maintenance of that effectiveness.

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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)

17. **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

18. **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)

19. **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)

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EMISSION LIMITS

20. **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 3-19.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

21. **Visible Emission Limit** - Visible emissions from the enclosed rotary rail car dumper (RD-1) shall not exceed 10 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). 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)

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22. **Visible Emission Limit** - Visible emissions from all fabric filters shall not exceed 3 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A) except during one six-minute period in any one hour in which visible emissions shall not exceed 10 percent opacity. 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)

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23. **Visible Emission Limit** - Visible emissions from the conveyor belt transfer points shall not exceed 10 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). 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)

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24. **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)

25. **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

26. **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:

    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 as required in Condition 15.

    d. Records of visible emission observations for the process equipment as required in Condition 16.

    e. Records of velocity measurement observations for the marine vessel unloading hoppers as required in Condition 14.

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

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

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

i. 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

27. **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

28. **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.

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

29. **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)

30. **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)

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

    a. To enter at reasonable times 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;

    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)

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32. **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.

    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:

    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)

33. **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)

34. **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 or 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)

35. **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)

36. **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)

37. **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)

38. **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)

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. $\underline{CE_{unc}\text{ for the KT predicted}}$: 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 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:

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

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

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 $SUMIR \leq 0.0225$
	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.

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** $F_r \geq 0.1$

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.

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}	Sl	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

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.

____ The suggested changes are attached for your consideration.

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

Signature: _____

Name: _____

Title: _____

Facility: _____

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: Thursday, August 17, 2006 4:19 PM

To: Ryan,Kelly

Subject: RE: draft permit

I would like to request an extension until September 1 to reply on the draft.

Thankyou

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

.....III-,

From: Ryan,Kelly [mailto:kmryan@deq.virginia.gov]

Sent: Monday, August 14, 2006 2:27 PM

To: Dan Wagoner

Subject: draft permit

Hi Dan,

Please review the attached draft pennit and return the Draft Permit Approval f orin to me by August

21, 2006. An extension may be granted if requested before August 21, 2006. I f you have any

questions, feel free to contact me.

Thanks,

Kelly

Kelly M. Ryan
Senior Environmental Engineer
Dept. of EnNironmental Quality

5636 Southern Blvd.
Virginia Beach, VA 23462

Phone: 757-518-2155
Fax: 757-518-2009
Email: kmryanra deq..virginia.go

8/21/2006

WHILACI-ITS

STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE

This perinit 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

iocated at

Pier 1 1, Harbor Road
Newport News, Virginia

in accordance with the Conditions of this permit.

Approved on DRAFT.

Harold J. Winer, Deputy Regional Director

Permit consists of 10 pages.
Permit Conditions I to 38.

INTRODUCTION

I 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, 19 89, April 22, 1992, December II, 2002, July 13, 2004 and Apfil 3, 2006. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quali ty may require a permit. Failure to obtain such a permit pfior to construction may result in enforcement action.

Words or tenns 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 Pollu tion. The regulatory reference or authofity for each condition is listed in parentheses (after eac h condition.

Annual requirements to fulfill legal obligations to maintain current stationar y source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the B oard for information to include, as appropriate: process and production data; changes in control equip ment-, and operating schedules. Such requests for information from the DEQ will either be in writi ng or by personal contact.

The availability of information submitted to the DEQ or the Board will be gove med by applicable provisions of the Freedom of Information Act, 2.2-3700 through 2.2-3714 of t he Code of Virginia, I 0. 1-1314 (addressing infonnation 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 appropfiate federal law and regulations goveming confidentiality of such infor mation.

J!ROCESS REQUIREMENTS Deleted:'

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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- I	Marine vessel grab unloader	2000 tons/hr	Enclosed grab
UL-2	tviarine vessel grab unloader	2000 tons,,hr	Enclosed grab
BH-1	Ship unload hopper	3400 tons/br	Fabric filter
BH-2	Ship unload hopper	3400 tons/hr	Fabric filter
BC- 14	Ship unload conveyor	6800 tons,,hr	Fully enclosed
BC- 15	Ship unload conveyor	6800 tons,,hr	Fullv enclosed

Equipment permitted p ior to the date of this permit:

RD-1	Tandem rotarv rail car dumper	5800 tons,,hr	Enclosed bldg. with water spr ay
BS-1	Surge silo	1000tons	Fabric filter
BS-2	Surge silo	3800 tons	Fabric filter
BS-3	Surge silo	4 1 00 tons	Fabric Filter
BC- I through BC- 1 3	Various coal handling and storage	Largest belt 6800 tons /hr	All fully enclosed (except 4, 7 convevors and 13 - yard belts)

S,'R- I & S,'R-2 Two (2) rotary stacker,'reclaimers 5900 tons/hr stacking, Wet suppression
6500 tons/hr reclaim
S;R-3 Rotary reclaimer 6800 tons!hr reclaim only Wet suppression
OS- I through OS-4 Coal, coke and limestone storage Up to 350,00 tons Wet suppression systein
piles (computerized)
SL-1 Ship/barge loader 6800 tons,hr Wet suppression, telescoping
loading chutes

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

3. Emission Controls - Particulate emissions firompach -marine - v-essel grab unloaderSUL-1 and UL-21 shall be_- Deleted: the
controlled by using enclosed grab buckets. The grab buckets shall be complete ly closed during transfer of
matefial from marine vessels to receiving hoppers.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

4. Emission Controls - Particulate emissions frompach marinevessel unloadingho EM-1 and BH-2) Deleted: ft
pper C - - - - - - - - -
shall be controlled by a fabric filter. The fabfic 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 ftom the enclosed rotary rail car dumper (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. 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.
(9 VAC 5-80-1180 and 9 VAC 5-50-260.)

7. Emission Controls - Particulate emissions from the conveyor system shall be controlled by convevor hoods
and wind guards. Ground level reclaim conveyor belts shall be controlled by w et suppression as necessary.
(9 VAC 5-80-1 1 80 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 attain 100 percent coverage of the storage area. The wet suppressio n system shall be provided
with adequate access for inspection.
(9 VAC 5-50-(O, 9 VAC 5- 80-1180 and 9 VAC 5-50-260)

9. Fugitive Dust Emission Controls - All storage piles shall be truncated, sta cker/reclaimers used to build flat
top piles, and the top compacted to minimize fUgitive emissions.
(9 VAC 5-50-90, 9 VAC 5- 80-1 1 80 and 9 VAC 5-50-260)

10. Eniission Controls - Wet suppression shall be applied as necessary to all incoi-ning loaded railcars located

within facility boundaries if they are not to be dumped within 24 hours.
((VAC 5-80-1 1 80 and 9 VAC 5-50-260)

1 1. Emission Controls - Work areas shall be monitored and wet suppression app lied 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 par ticular 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 shall be co ntrolled by a fabric filter. The
fabric filters shall be provided with adequate access for inspection.
(9 VAC 5-80-1 180 and 9 VAC 5-50-260)

14. Monitoring - Marine Vessel Unloading Hoppers - The perrnittee shall measur e the air velocity in or at
the inlet of the duct that captures dust fi-om the marine vessel unloading hop pers with a frequency oQhe ------- Deleted: not less than once each operating dav
lesser of once per week or once per vessel being unloaded. An acceptable velo city range shall be established
that reflects good air pollution control practice. Once the velocity range ha s been established, the permittee
shall measure and adjust as necessary on a monthly basis to ensure the collect ion system remains effective.
,Thepermittee shall -maintain a log of the date,-time,-Iocation, name of perso n performingthevelocity --------- -cit) outside the
acceptable range shall indicate the need
measuremen6l and any corrective actions taken, if necessary. These records sha ll be available for for couecti, e action.
Deleted: A velc

inspection by the DEQ and shall be current for the most recent five years. Del eted: obser, ation, whether or not
(9 VAC 5-80-1180 and 9 VAC 5-50-20) isible emissions were detected
Comnient: We assume that the ptupose
15. Monitoring - Fabric Filters -,AAer completion of initialperformance testin g on the marine vessel - - - - - - - of this paragraph (1 4) is to ensice
unloading hoppers, once permonth, duiing nonnal o - - - - - - - - - - fo he ef fecliveness of the hopper dust control
pSrations, the exhaust from -each fabric filter - r t- - - - - and the mainten ance of that effectiveness.
surge silos and marine vessel unloading hoppers shall be observed by the permi ttee for a pefiod of no less C@Ietied: Once
than one minute for the presence of visible emissions. If visible emissions a re observed in excess of the
Deleted: dav
emission limits specified in this permit,, the permittee shall perform correct ive actions to eliminate the cdus@
of the visible emissions and shall increase monitoring frequency to once per w eek. Once weekly monitorin-,
is completed for a thirty (30) day period without observing excess visible emi ssions, the pern-Littee may
resume a monthly schedule of observations. The permittee shall maintain a log of the date, time, location,
name of person performing the observation, whether or not visible emissions we re 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. Monitoring - Process Equipment -,@kker corriRletioncif initialperformance testing on the marine vessel Formatted: Font: Not Bold
grab unloaders (LJL-1 and UL-2),opceperirrignth, during_normal op - - - - - r- m ffie eted: 0
_erations, particulate -emissions f o -
marine vessel grab unloaders (UL-1 and UL-2). the enclosed rotary rail car dum per (RD- 1) and the Deleted: day
conveyor systems shall be observed by the permittee for a period of no less th an one minute for the presetice
of visible emissions. If visible emissions are observed in excess of the emis sion limits specified in this
permit,, the permittee shall perform corrective actions to eliminate the cause of the visible emissions, if
necessary, and shall increase monitoring frequency to once per week. Once wee kly monitoring is
completed for a thirty (30) day period without observing excess visible emissi ons, the permittee may resume
a monthly schedule of observations. The permittee shalt maintain a log of the date, time, location, name of
person perforrning the observation, whether or not visible emissions were dete cted, 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)

17. 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 altemative 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

18. 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)

19. Throughput - The throughput ofegaUpetroleurri coke/limestone (combined), via -rail and ship,- shall-not - - - - - - -Deleted: imported exceed 24,000,000 tons per year, calculated monthly as the sum of each consecutive 12-month period. No more than I 0,000,000 tons per year of coal/petroleum coke/limestone (combined) shal I be imported via ship. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently compteted calendar month to the individual monthly totals for the preceding I I months.
(9 VAC 5-80-1 1 80)

EMISSION LIMITS

20. 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 detennined as stated in Condition numbers 3-19.
(9 VAC 5-80-1 1 80 and 9 VAC 5-50-260)

21. Visible Emission Limit - Visible emissions from the enclosed rotary rail car dumper (RD-1) shall not exceed,10percent opacity_as determined by the EPA Method 9 Creference -40-CFR 60, App - - - - - - - - - -Deleted: oendix A). Failure to meet this limitation due to the presence of water vapor shall not be a viol

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

22. Visible Emission Limit - Visible emissions from all fabfic filters shall n
ot exceed@_percent opecity as - - - - - - -Deleted: 0
determined by the EPA Method 9 (reference 40 CFR 60, Appendix A) except dufing
 one six-minute period
in any one hour in which visible emissions shall not exceed 10 percent opacity
. 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. N'isible Emission Limit - Visible emissions from the conveyor belt transfe r points shall not exceed@O - - - - - - - -Deleted: 5
percent opacity as detennined by the EPA Method 9 (reference 40 CFR 60, Append ix A). 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)

24. Monitoring PMIO - Dominion Tenninal Associates shall install and operate a PM 10 monitor at the
Newport News Housing Authofity Maintenance Buildincr (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)

25. 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 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 Icnown 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 fu gitive 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 5-80-1 1 80 and 9 VAC 5-50-260)

RECORDS

26. On Site Records - The permittee shall maintain records of emission data an d 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:

Annual throughput ofcoaUp d Formatted: Bullets and Numbering
a. _etroleum coke/limestone (combined), via rail an ship, calculated monthly
v-e -1 -2--m- o-n-th- period. C-o- -m-pl-ia-n-c-e -fo-r-t -he- c-o-n-se-c-u- - - - - -- - -Deleted: imported
as the sum of each consecuti tive 12-month period shall
be demonstrated monthly by adding the total for the most recently completed ca lendar month to the
individual monthly totals for the preceding 1 1 months.

b. Annual throughput of imported coal"petroteum coke/limestone (coi-nbined), v ia ship, calculated monthly
as the sum of each consecutive 12-month period. Compliance for the consecutiv e 12-month period shall

be demonstrated monthly by adding the total for the most recently completed ca lendar month to the
individual monthly totals for the preceding I I months.

c. Records of visible emission observations for fabric filters as required in Condition 15.

d. Records of visible emission observations for the process equipment as requi red in Condition 16.

e. Records of velocitv measurement observations for the marine vessel unloadin g hoppers as required in
Condition 14.

f. Records of PM IO monitoring operations as required by Appendix J of 40 CFR Part 50.

g. Maximum daily quantity of coal/petroleum coke/limestone (combined) in stora ge. Formatted: Bullets and Numbering

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

i. Records of dust control measures as required by Appendix A. Formatted: Bull ets and Numbering

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

INITIAL COMPLIANCE DETERMINATION

27. Visible Emissions Evaluation - Initial perforinance test of Visible Emissi on Evaluations (VEE) in
accordance with 40 CFR Part 60, Appendix A, Method 9, shall be conducted by th e permittee on the marine
vessel unloading operations. Each test shall consist of 30 sets of 24 consecu tive 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 perform ed to demonstrate
compliance within 60 days after achieving the maximum production rate but in n o 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 confon-n to the test report format
enclosed with this perrnit.
(9 VAC 5-50-30, 9 VAC 5-80-1200 and 9 VAC 5-50-41 0)

NOTIFICATIONS

28. Initial Notifications - The permittee shall fumish written notification to the Tidewater Regional Office of:

a. The actual date on which construction of the marine unloading facilities co mmenced 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 f acilities postmarked at least
30 days prior to such date.

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

Associate Director
OfFice of Air Enforcement (3AP10)
U.S. Environmental Protection Agency

Region 111
1650 Arch Street
Philadelphia, PA 19103-2029]
(9 VAC 5-50-50 and 9 VAC 5-80-1180)

GENERAL CONDITIONS

29. Permit Invalidation - The portions of this permit regarding construction o f 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: Deleted:
i. 1 8 months from the date of this permit;
.....

ii. Nine months from the date that the last pen-nit or other authorization was issued from any other
govemmental entity,

iii. Nine months from the date of the last resolution of any litigation coneem ing any such pertnits or
authorization: or

b. A prograrn of construction is discontinued for a petiod of 18 months or mor e, or is not completed within
a reasonable time, except for a DEQ approved period between phases of a phased construction project.
(9 VAC 5 -80-12 1 0)

30. 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:
Deleted: an
c. Fails to comply with any emission standards applicable to a permitted,emiss ions unit, - - - - - - - - - - - --- Deleted: included in this pemit
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, inclu ding any emission standards
or emission limitations, in the State Implementation Plan in effect at the tim e an application for this
permit is submitted.
(9 VAC 5-80-1210 F)

31. Right of Entry - The pennittee shall allow authorized local, state, and fe deral representatives, upon the
presentation of credentials:

a. To enter at reasonable times upon the pennittee's premises on which the fac ility is located or in which
any records are required to be kept under the terms and conditions of this per mit;

b. To have access to and copy at reasonable times any records required to be k ept under the terms and
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
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 reason
able during regular business
hours or whenever the facility is in operation. Nothing contained herein shal
l make an inspection time
unreasonable durinar an emergency.
(9 VAC 5-170-130 and 9 VAC 5-80-1180)

32. Maintenance/Operating Procedures - At all times, including periods of star t-up, shutdown, and malfunction, the perrnittee shall, to the extent practicable, maintain and ope rate@he affected source, Deleted: including associated air pollution control equipment, in a manner consistent w ith good air pollution control practices for minimizing emissions.

During each shifl, one designated person shall be responsible for compliance w ith the procedures of Appendix A. Actions required in support of these procedures shall take precede nce over routine coal, petroleum coke and limestone handling procedures. The permittee shall take th e following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipmen@ m9nitoringdevices and-process equipment which-affect-such emissions: -Deleted:

a. Develop a maintenance schedule and maintain records of all scheduled and no n-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 familiari ze 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 o f five years and shall be made available to DEQ personnel upon request.
(9 VAC 5-50-20 E and 9 VAC 5-80-1 1 80 D.)

33. Record of Malfunctions - The permittee shall maintain records of the occur rence 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 and name of person generating the record.
MAC 5-20-180 J and 9 VAC 5-80-1 180 D)

34. Notification for Facility or Control Equipment Malfunction - The permittee shall fumish notification to 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 transmission, telephone or telegraph or other electronic communication. Such notification s hall be made as soon as practicable but no later than four daytime business hours after the malfunctio

n is discovered. The permittee
shall provide a written statement giving all pertinent facts, including the es timated duration of the
breakdown, within two weeks of discovery of the malfLtnction. When the condit ion causing the failure or
malfunction has been corrected and the equipment is again in operation, the pe rmittee shall notify the
Director, Tidewater Pegional Office.
(9 VAC 5-20-1 80 C and 9 VAC 5-80-1 1 80.)

35. Violation of Ambient Air Quality Standard - The pennittee 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 nor-mal operation until such time as the ambi ent air quality standard will not
be violated.
(9 VAC 5-20-1801 and 9 VAC 5-80-1180)

36. Change of Ownership - In the case of a transfer of ownership of a stationa ry 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 5-80-1240)

37. 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 information from the DEQ will either b e in writing or by personal
contact. The availability of inforrnation submitted to the DEQ or the Board w ill be govemed 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, 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 goveming confidentiality of such infon nation.
(9 VAC 5-170-60 and 9 VAC 5-20-160.)

38. Permit Copy - The permittee shall keep a copy of this perinit on the pren- Lises of the facility to which it
applies.
(9 VAC 5-80-1180)

APPENDIX A

This appendix is to be considered a part of the Department of EnvirorLmental 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 Fahreriheit

Average hourly relative humidity (RH)

Average hourly wind speed in miles per hour (WS.)

Average hourly wind direction (DI R)

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 (1.68p lb/ft-hr) from the following equations

-24.88 < T < 32 1.68p = 0.000 I 207(T) + 0.0655479
32.00 < T < 64.40 1.68g = 0.0001493(T) + 0.0646353
64.40 < T < 104 1.68[t = 0.0001344(T) + 0.0655899

K as determined by the equation: K = WS(T/R-H) (p/p 1.68)

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

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

a. CE fortheKTpredicted: willehangebythenewhourlypredictionofKT. Attheendofthe daywill

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

b. Slope of the unc ntrolled intended movement with time for the PASS- I system without controls: will

change by the new hourly prediction of KT.

c. PASS-1 line, with hourly markinjzs in proportion depicting the controlled t o 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 I.Ig/m . , if no further cycles are applied

and is the pr-imarv control medium. It generates from the uncontrolled slope line (b.).

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

as in (c) will vary as suppression cycles are applied. The extension of this line depicts the near hip-h 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- I line are one and the same, their extension will be the end of the day value attained for coal and
3
petroleum coke emissions in gg/m . It generates from the uncontrolled CE., lin e (a.).

e. PASS-0 O 80) line, with hourly markings in proportions to the hourly K, dep ictinp, the controlled emission

level when the wind direction is between ISO' and 270'T. This line is activat ed by wind direction inputs

and holds the last highest value during periods when the wind is out of quadra nt. Its extension represents

the near end of day value in ltg/m. 3at station 180-J if no further cycles are applied. This line also generates

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

COLL'AfN I
TM Records the hourly values for a 24 hour day, beginning with a I at 0100 hou rs 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) * (p/1.68p)

COLUAIN 3
KD Computes and records the K factor adjusted for rain and freeze effects. 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,

COLL11VIN4
cj Records the total number of cycles credited on the hour. A 20-minute suppre ssion 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 0.0 I 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.

C0LL1,k-fN 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 I 0, 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.

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

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

Note: CIR,thetotalamountofraincreditedforthehouriscomputedasfollows:

CIR=lRifitisraining,butaddsO.0225tolRifaDEMANDIVRBCisadministered.

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

rains, where:

IRadj = CiRn-I / (HRS,,_1 + 1) when IR > 0 and HRS > 0

lRadj = SUMIR.-I / (HRSn-I + 1) when IP, > 0, SUMIR > 0.0-1-15; and HRS = 0

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

COL t IMN 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 (Fr > 0.9 or HRS

= 48)

Note: IfaDEMANDIVcycleisadministeredinordertorecoverfromafreeze,HRSisinitially setto

0.5 instead of 1.

HRS = 0 when Ci = 3 and FiRn-I = 0 or Ff@n_j < I

HRS = 0 when IR > 0 and SUM IR > 0.0225

HRS = 0.5 when Ci = 3@ FIR,-, > O;and Ffr,,-, > I

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

or when IR = 0; SUMIR > 0.0225

Note: IfTM=24andHRS<48andF,<0.9thenHRSandSUMIRarecarriedforwardtothenext

day. If HRS = 48 or Fr > 0.9 the post rain effect has reached its limits. On t he next hour, Fr 1, HRS

0, and SUMIR = 0.

COLUAfN 9
SUMIR Computes and records the effective sum of the hourly rainfall as follows :

SLIMIR = 0 when CIR = 0 and SLJMIRn-I < 0.0225

SUMIR = SUMIRn-I when CIR = 0 and SUMIR,,_1 > 0.0225

SUMIR=CIR when CIR > UIR + lRn-1) < 0.0225;and Ft@,_j I

SUMIR = CIR wheii CIR > 0; (IR + IR,-,) < 0.0225 Ff,,-, < 1;

CIR@_j > 0, and Ci = 3

SUMIR = IR + SUMlRn-1 when CIR > O, (I R + IR,_j) < 0.0225;

Ff,_1 < 1; CiRn-I > 0; and Ci < 3

SLfMIR = lRadj,-, + CIR when CIR > 0; (IR + IR@_,) < 0.0225 Ff@n_j < 1;

Cl R@_] = 0;

SLJMIR = lRadj,_j + CIR when CIR > O@ and (I R + IR@_,) > 0.0225

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

COLUMN /O
F, Computes and records the post rain recovery factor. F, ranges from zero to one, with F, set to zero

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

hour. Fr is computed as follows:

Fr = 0 when CIR < 0.0225 and SUMIR > 0.0225

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

Fr= I O(-215.661241SUM IRAH RS' KT)) when CIR < 0.0225 and SUMIR < 0.0225

COL UMN /I
F fr Computes and records the combined effects of rain and freeze, where Ffr = F, * Ff.

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

Ff= ((SUMKF * FHRS)/(FIR * 106)) * 4.02917 + 0.305 when FIR > 0 and SUMKF > 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 297 until F, < 0.1 or until continuous cycles are administ ered.

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

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

FIR = FIR.-, when FIRn-I = 0: SUNIIR = 0, FHRS # 8 and SUMKF > 0

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

FIR = SUMIR for all other conditions

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

FHRS = 0 when SUMIR = 0 and SUMK-F = 0

MRS = HRS when SUMIR > 0 and SUMKF = 0

FHRS = HRS when SUMKF > 0; TEMP > 34'F; and F, < 0.1

FHRS = FHRS + I when SUMKF > 0; and TEMP < 34'F or F, > 0.1

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

KT, = K, + K, + K3 + . . . Kn + Kn(24-TM)

EXAMPLE: TM K

1 10

2 10

3 20

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

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

H,j = Ksum * SI * Ft.,

where:

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

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

At TM I

SI sb when Ci = 0

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

SI = sb * (I-eff) when Ci > 0

For all other times (n):

SI = Sl,j@_j *(I -efOn

where SI,
,j_j is the last value of SI in the previous Ci sequence Sl,j_j = sb prior to any cycles.

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

Equation A:

(1-eff), = (1-(36.6572(c * I ol -11-111 1 812 1 i - K,. 100))C@@q

Equation B:

(I-ef0b = (1-((-0.0146913 * Ksum + 14.65059)/100))C,,q

Equation A can be used to calculate the efficiencies when KT < 288 othenvise u se Equation B unti I

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

where sp = 0.6256838 - 0.0008297 * KT

then switch to Equation A.

Note: At the begirLning of the day, (I -efl) = I until a cycle occurs. If a c ycle is credited at time I

(cycle performed at TM 0000) then the equation for (I-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.

C,,q is the cycle sequence for the current cycle set.

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

Cseq = Cseqn-I when Cm = Cin-I

Cseq = 0.5 when Cin > Cin-1; Fft > 1; and Ci I

cr"q = 1 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 (1-eff) cseq Si Ffr H,j

I 2O. I 0 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. 8 -55 9 2 1 0.350 1.0 11.0307

COLUAff 14
YH,j Computesandrecordsthesumofthecoalandpetroleumcokedustintheh VS(HiVolSample r)tothe

hour as follows:

Y-H,j = H%,i + Y-H%jcjn-j

where Y-H,j,j@-j is the last value of YH,.i in the previous cycle sequence.

EXAMPLE: Using the values from the previous example:

TM YI-Ivicin-[Y-H,j

1 0.0 8.2024

2 0.0 15.1398

3 15.1398 20.902(

4 15.1398 26.1705

COLUAff 15
HVT ComputesandrecordstheprojectedamountofdustontheHVSfilterattheendofthedayif nofurther

cycles were administered.

HVT = YH,j + K-L * SI * (I -eff)

where KL = KT - sum(Ki -4- K, +... K,)

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

COL UlvfjV / 6
TEMP Records the temperature in degrees Fahrenheit.

COLUAIN 17
RH Records the relative humidity (percent)

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

COLLIAfN 19
WS Records the wind speed (mi[hr)

COL UA-ff 20
#Cc Records the number of suppression cycles credited for hour. The suppressio n cycles are only credited

when the wind is blowing within the 180 to 270 degree quadrant.

COLL /XfN 2 /
Y-HVIc Computes and records the sum of the dust in the HiVol accumulated when the wind is blowing

within the ISO 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 perrnit or regist ration)
Test Dates.
Tester; name, address and report date

Certification
Signed by team leader/certified observer (inciude 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 infonnation

Source Operation
Description of process and control devices
Process and control 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 enteiing
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 emissioti evaluations

DRAFT PERMIT APPROVAL FORM

Department of Environmental Quality
Tidewater Regional Office
5636 Southem Blvd.
Virginia Beach, Virginia 1-3462

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 perinit is considered acceptable and will proceed with processing the pennit. 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 pennit dated unacceptable.

The suggested changes are attached for your consideration.

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

Si--nature:

Name:

I itle:

Facilit\:

Diite: