

DRAFT

**AIR EMISSION PERMIT NO. 13700028-010
Major Amendment**

IS ISSUED TO

City of Virginia
Laurentian Energy Authority LLC
Virginia Public Utilities Commission
618 2nd Street South
Virginia, St. Louis County, MN 55792

The emission units, control equipment and emission stacks at the stationary source authorized in this permit amendment are as described in the Permit Applications Table.

This permit amendment supersedes Air Emission Permit No. 13700028-009 and authorizes the Permittee to modify and operate the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Unless otherwise indicated, all the Minnesota rules cited as the origin of the permit terms are incorporated into the SIP under 40 CFR § 52.1220 and as such as are enforceable by U.S. Environmental Protection Agency (EPA) Administrator or citizens under the Clean Air Act.

Permit Type: Federal; Pt 70/Major for NSR; Limits to Avoid NSR

Operating Permit Issue Date: <>

Major Amendment Issue Date: <issue date>

Expiration Date: January 18, 2017 – All Title I Conditions do not expire.

Don A. Smith, Manager
Air Quality Permits Section
Industrial Division

for John Linc Stine
Commissioner
Minnesota Pollution Control Agency

Permit Applications Table

Permit Type	Application Date	Permit Action
Total Facility Operating Permit Reissuance	December 28, 2009	009
Major Amendment	April 18, 2012	010

TABLE OF CONTENTS

Notice to the Permittee

Permit Shield

Facility Description

Amendment Description

Table A: Limits and Other Requirements

Table B: Submittals

Table C: Compliance Schedule

Appendix A: Not used in this permit

Appendix B: Insignificant Activities

Appendix C: Modeling Parameters

NOTICE TO THE PERMITTEE:

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(651) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

FACILITY DESCRIPTION:

The City of Virginia Department of Public Utilities is a citizen-owned utility providing steam and electricity to businesses and residents of the local Virginia area. The department has the potential to operate any combination of four boilers using coal and/or natural gas and/or wood as fuel. Boiler 7 (EU001) and Boiler 9 (EU003) can burn only coal and Boiler 10 (EU004) is a natural gas fired boiler. Boiler 11 (EU 006) is a wood fired boiler to be used for district heating and electric generation. There is an additional boiler, Boiler 8, located at the facility but is physically disconnected from the Utility System. Pollution control equipment consists of wet scrubbers, baghouses, and/or electrostatic precipitators in combination with good combustion practices.

AMENDMENT DESCRIPTION:

This permit action (Air Emission Permit No. 13700028-010) places new limits on emissions of CO, NO_x, PM_{2.5}, and PM₁₀ from EU 006 (Boiler #11). Compliance with the new limit is determined by measuring CO emissions directly with a continuous emissions monitor (CEM). The new CO limit replaces a permit limit on hours of operation of EU 006 (Boiler #11). In combination with a pound per hour limit, the previous limit restricted annual emissions of CO below the threshold for an Environmental Assessment Worksheet (EAW). The new limits on CO, NO_x, PM_{2.5}, and PM₁₀ emissions are needed to avoid triggering a review under the Prevention of Significant Deterioration regulation. The CO emissions allowed by the new limits remain below the EAW threshold.

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-1

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.

Subject Item: Total Facility

What to do	Why to do it
SOURCE-SPECIFIC REQUIREMENTS	hdr
<p>Permit Appendices: This permit contains appendices as listed in the permit Table of Contents.</p> <p>The Permittee shall comply with all requirements contained in Appendix B: Insignificant Activities.</p> <p>Modeling parameters in Appendix C: Modeled Stack Parameters are included for reference only and compliance with these parameters is achieved through meeting the Table A requirements that reference Appendix C.</p>	Minn. R. 7007.0800, subp. 2
Parameters Used in Modeling: The stack heights, emission rates, and other parameters used in the most recent dispersion modeling are listed in the Appendix C of this permit. The Permittee must submit to the Commissioner for approval any revisions of these parameters and must wait for a written approval before making such changes. The information submitted must include, at a minimum, the locations, heights and diameters of the stacks, locations and dimensions of nearby buildings, the velocity and temperatures of the gases emitted, and the emission rates. The plume dispersion characteristics due to the revisions of the information must be equivalent to or better than the dispersion characteristics modeled. The Permittee shall demonstrate this equivalency in the proposal. If the information does not demonstrate equivalent or better dispersion characteristics, or if a conclusion cannot readily be made about the dispersion, the Permittee must remodel.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
<p>For changes that do not involve an increase in an emission rate and that do not require a permit amendment, this proposal must be submitted as soon as practicable, but no less than 60 days before beginning actual construction of the stack or associated emission unit.</p> <p>For changes involving increases in emission rates and that require a minor permit amendment, the proposal must be submitted as soon as practicable, but no less than 60 days before beginning actual construction of the stack or associated emission unit.</p> <p>For changes involving increases in emission rates and that require a permit amendment other than a minor amendment, the proposal must be submitted with the permit application.</p>	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
DETERMINING IF A PROJECT/MODIFICATION IS SUBJECT TO NSR	hdr
<p>These requirements apply if a reasonable possibility (RP) as defined in 40 CFR Section 52.21(r)(6)(vi) exists that a proposed project, analyzed using the actual-to-projected-actual (ATPA) test (either by itself or as part of the hybrid test at Section 52.21(a)(2)(iv)(f)) and found to not be part of a major modification, may result in a significant emissions increase (SEI). If the ATPA test is not used for the project, or if there is no RP that the proposed project could result in a SEI, these requirements do not apply to that project. The Permittee is only subject to the Preconstruction Documentation requirement for a project where a RP occurs only within the meaning of Section 52.21(r)(6)(vi)(b).</p> <p>Even though a particular modification is not subject to New Source Review (NSR), or where there isn't a RP that a proposed project could result in a SEI, a permit amendment, recordkeeping, or notification may still be required by Minn. R. 7007.1150 - 7007.1500.</p>	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-2** 11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

<p>Preconstruction Documentation -- Before beginning actual construction on a project, the Permittee shall document the following:</p> <ol style="list-style-type: none"> 1. Project description 2. Identification of any emission unit (EU) whose emissions of an NSR pollutant could be affected 3. Pre-change potential emissions of any affected existing EU, and the projected post-change potential emissions of any affected existing or new EU. 4. A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded due to increases not associated with the modification and that the EU could have accommodated during the baseline period, an explanation of why the amounts were excluded, and any creditable contemporaneous increases and decreases that were considered in the determination. <p>The Permittee shall maintain records of this documentation.</p>	<p>Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.1200, subp. 4; Minn. R. 7007.0800, subps. 4 & 5</p>
<p>The Permittee shall monitor the actual emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using the ATPA test, and the potential emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using potential emissions in the hybrid test. The Permittee shall calculate and maintain a record of the sum of the actual and potential (if the hybrid test was used in the analysis) emissions of the regulated pollutant, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity of or potential to emit of any unit associated with the project.</p>	<p>Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5</p>
<p>Before beginning actual construction of any project which includes any electric utility steam generating unit (EUSGU), the Permittee shall submit a copy of the preconstruction documentation (items 1-4 under Preconstruction Documentation, above) to the Agency.</p>	<p>Title I Condition: 40 CFR Section 52.21(r)(6)(ii); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5</p>
<p>For any project which includes any EUSGU, the Permittee must submit an annual report to the Agency, within 60 days after the end of the calendar year. The report shall contain:</p> <ol style="list-style-type: none"> a. The name and ID number of the facility, and the name and telephone number of the facility contact person b. The quantified annual emissions analyzed using the ATPA test, plus the potential emissions associated with the same project analyzed as part of a hybrid test. c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection, if that is the case. 	<p>Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5</p>
<p>For any project which does not include any EUSGU, the Permittee must submit a report to the Agency if the annual summed (actual, plus potential used in hybrid test) emissions differ from the preconstruction projection and exceed the baseline actual emissions by a significant amount as listed at 40 CFR Section 52.21(b)(23). Such report shall be submitted to the Agency within 60 days after the end of the year in which the exceedances occur. The report shall contain:</p> <ol style="list-style-type: none"> a. The name and ID number of the facility, and the name and telephone number of the facility contact person b. The annual emissions (actual, plus potential if any part of the project was analyzed using the hybrid test) for each pollutant for which the preconstruction projection and significant emissions rate is exceeded. c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection. 	<p>Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5</p>
OPERATIONAL REQUIREMENTS	hdr
<p>The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA.</p>	<p>40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080</p>
<p>Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.</p>	<p>Minn. R. 7011.0020</p>
<p>Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated.</p>	<p>Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-3**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subps. 14 and 16(J)
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Fugitive Emissions Control Plan: The Permittee shall follow the actions and record keeping specified in the existing Fugitive Control Plan. If the Commissioner determines the Permittee is out of compliance with Minn. R. 7011.0150 or the fugitive emission control plan, then the Permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
PERFORMANCE TESTING	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, and/or B.	Minn. R. ch. 7017
Performance Test Notifications and Submittals: Performance Tests are due as outlined in Table A of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	Minn. R. 7017.2018; Minn. R. 7017.2030, subps. 1-4; Minn. R. 7017.2035, subps. 1-2
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change.	Minn. R. 7017.2025, subp. 3
MONITORING REQUIREMENTS	hdr
Monitoring Equipment Calibration: The Permittee shall calibrate all required monitoring equipment at least once every 12 months (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, and/or B, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
RECORDKEEPING	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-4**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Recordkeeping: Retain all records at the stationary source, unless otherwise specified within this permit, for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)
If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. These records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format.	Minn. R. 7007.1200, subp. 4
REPORTING/SUBMITTALS	hdr
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 - 7007.1500

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-5**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

<p>For changes that do not require a permit amendment:</p> <p>- The Permittee shall submit a Part 1 MACT application within 30 days of startup of any 112(j) affected source. The application shall meet the requirements of 40 CFR Section 63.53(a).</p> <p>- The Permittee shall submit a Part 2 MACT application within 90 days of startup of any 112(j) affected source. The application shall meet the requirements of 40 CFR Section 63.53(b).</p> <p>112(j) affected source is defined in 40 CFR Section 63.51.</p> <p>At the time of permit issuance, 112(j) affected sources include utility boilers, brick and structural clay products manufacturing, and clay ceramics manufacturing.</p>	40 CFR Section 63.52(b)(1) and 63.52(e)(1)
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance, to be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 - 7019.3100
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 - 7002.0095

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-6**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: GP 001 Boilers 7 and 9 SO2 limits**Associated Items:** EU 001 Boiler #7

EU 003 Boiler #9

MR 015 Boiler 7 CO2

MR 016 Boiler 7 SO2

MR 017 Boiler 9 CO2

MR 018 Boiler 9 SO2

SV 002 Boiler No. 7

SV 003 Boiler No. 9

What to do	Why to do it
Sulfur Dioxide: less than or equal to 2.50 lbs/million Btu heat input using 1-Hour Average when only one of the emission units in GP001 is combusting coal.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080; Minn. R. 7011.0510, subp. 1
Sulfur Dioxide: less than or equal to 1.60 lbs/million Btu heat input using 1-Hour Average when both EU 001 and EU 003 are combusting coal. This SO2 limit applies individually to each emission unit.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080; Minn. R. 7011.0510, subp. 1
Coal Combustion Monitoring: The Permittee shall record the start and stop dates and times of all coal combustion periods for EU 001 and EU 003. The Permittee may use the data from the SO2 CEMS for EU001 (on SV002) and the SO2 CEMS for EU003 (on SV003) to meet this recordkeeping requirement provided that the CEMS data continuously specifies the time and date. However, when either or both of the CEMS malfunction, the Permittee shall keep a written log of coal combustion in EU001 and/or EU003 in place of CEMS data, during the CEMS malfunction.	Minn. R. 7007.0800, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-7** 11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: GP 002 Boilers 7, 9, and 10 and makeup air heater NOx cap**Associated Items:** EU 001 Boiler #7

EU 003 Boiler #9

EU 004 Boiler #10

EU 005 Makeup Air Heater

What to do	Why to do it
Nitrogen Oxides: less than 73.08 tons/month using 12-month Rolling Average basis. This limit applies to the combined NOX emissions from the units listed as Associated Items.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Recordkeeping: by the 15th day of each month, the Permittee shall record the following information: 1. total quantity of coal burned in EU001 during the previous month, in tons (A); 2. tons quantity of coal burned in EU003 during the previous month, in tons (B); 3. total monthly NOx emissions from EU004 and EU005 as measured by NOx CEMS, in tons (y) 4. quantity of natural gas combusted in EU004 and EU005 during times of NOx CEMS malfunction (z). The Permittee shall use these fuel usage records, NOx emissions data, and Equation 1 to determine monthly facility NOx emissions.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 5
By the 15th day of each month the Permittee shall calculate and record the monthly NOx emissions for the previous month using Equation 1: NOx emissions = (EF1c x A) + (EF3c x B) + (EF4g x z) + y EF1c = The MPCA-approved emission factor for coal combustion at EU001, tons NOx/ton coal; at the time of permit issuance, the factor is 0.0037 tons NOx/ton coal EF3c = The MPCA-approved emission factor for coal combustion at EU003, tons NOx/ton coal; at the time of permit issuance, the factor is 0.0036 tons NOx/ton coal EF4g = The MPCA-approved emission factor for natural gas combustion at EU004 and EU005, tons NOx/mmcf natural gas; at the time of permit issuance, the factor is 0.05 ton NOx/mmcf natural gas A, B, y, and z are as described above.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4(B)
By the 15th day of each month the Permittee shall calculate and record the monthly 12-month rolling average NOx emission rate. The monthly 12-month rolling average shall be determined by summing the monthly NOx emission rates (determined using the above equation) for the previous 12 months, and dividing by 12.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4(B)
Revision of Equation 1 Emission Factors: All Equation 1 emission factors are subject to change based on the results of performance tests. The Permittee shall use the most-recent performance test-revised emission factor for calculating emissions, upon receipt of written notification from the MPCA that the performance testing results were valid. For the interim period prior to receipt of any written MPCA notification, the Permittee shall use the most recently-approved factors (defined above or in a more recent approval letter from MPCA).	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-8**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: GP 003 Material Handling Baghouses**Associated Items:** CE 010 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 013 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 014 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
The Permittee shall operate and maintain each of the fabric filters (listed as Associated Items) at all times that any emission unit controlled by the fabric filter is in operation. The Permittee shall document periods of non-operation of the control equipment when the emission unit is in operation.	Title I Condition: 40 CFR Section 52.21 BACT Limit; Minn. R. 7007.3000
The Permittee shall operate and maintain each of the fabric filters in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
The Permittee shall operate and maintain each fabric filter such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99.0 percent control efficiency	Minn. R. 7011.0070, subp. 1(A)
The Permittee shall operate and maintain each fabric filter such that it achieves an overall control efficiency for PM < 10 micron: greater than or equal to 93.0 percent control efficiency	Minn. R. 7011.0070, subp. 1(A)
Pressure Drop: greater than or equal to 2.0 inches of water column and less than or equal to 6.0 inches of water column (CE010), unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change.	Title I Condition: 40 CFR Section 52.21 BACT Limit; Minn. R. 7007.3000
Pressure Drop: greater than or equal to 2.0 inches of water column and less than or equal to 6.0 inches of water column (CE013), unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change.	Title I Condition: 40 CFR Section 52.21 BACT Limit; Minn. R. 7007.3000
Pressure Drop: greater than or equal to 2.0 inches of water column and less than or equal to 6.0 inches of water column (CE014), unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change.	Title I Condition: 40 CFR Section 52.21 BACT Limit; Minn. R. 7007.3000
Visible Emissions: The Permittee shall check each of the fabric filter stacks (SV006, SV009, and SV010) for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall instead read and record the pressure drop across the fabric filters, once each day of operation.	Title I Condition: 40 CFR Section 52.21 BACT Limit; Minn. R. 7007.3000
Recordkeeping of Visible Emissions and Pressure Drop. The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, and whether or not any visible emissions were observed, or whether the observed pressure drop was within the range specified in this permit.	Title I Condition: 40 CFR Section 52.21 BACT Limit; Minn. R. 7007.3000
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Virginia Department of Public Utilities
Permit Number: 13700028 - 010

Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the internal or external components of the control equipment. Internal inspections shall be conducted semiannually, with external inspections taking place during alternating calendar quarters when internal inspections are not required. The Permittee shall maintain a written record of these internal and external inspections.	Minn. R. 7007.0800, subp. 4, 5 and 14
---	---------------------------------------

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-10**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: GP 004 NSPS CEMS**Associated Items:** MR 005 Boiler 10 NOx

MR 010 Boiler 10 CO2 (bias adjustment)

What to do	Why to do it
Additional requirements can be found in Table B.	hdr
CEMS Monitor Design: Each CEMS shall be designed to complete a minimum of one cycle of sampling, analyzing, and data recording in each 15-minute period.	40 CFR Section 60.13(e)(2)
Continuous Operation: CEMS must be operated and data recorded during all periods of emission unit operation including periods of emission unit start-up, shutdown, or malfunction except for periods of acceptable monitor downtime. This requirement applies whether or not a numerical emission limit applies during these periods. A CEMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment. No data record is required for the diluent monitors. Acceptable monitor downtime includes reasonable periods as listed in Items A, B, C and D of Minn. R. 7017.1090, subp. 2.	40 CFR Section 60.13(e); Minn. R. 7017.1090
Monitoring Data: Reduce all data to 1-hour averages, in accordance with 40 CFR Section 60.13(h). 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period.	40 CFR Section 60.13(h); Minn. R. 7017.1160, subp. 1 and 2
QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan shall be on site and available for inspection within 30 days after monitor certification. The plan shall contain all of the information required by 40 CFR Part 60, Appendix F, section 3. The plan shall include the manufacturer's spare parts list for each CEMS and require that those parts be kept at the facility unless the Commissioner gives written approval to exclude specific spare parts from the list.	40 CFR Part 60, Appendix F, Section 3; Minn. R. 7017.1170, subp. 2
CEMS QA/QC: The owner or operator of an affected facility is subject to the performance specifications listed in 40 CFR Part 60, Appendix B, and shall operate, calibrate, and maintain each CEMS according to the QA/QC procedures in 40 CFR Part 60, Appendix F, as amended and maintain a written QA/QC program available in a form suitable for inspection.	40 CFR Part 60, Appendix F; 40 CFR Section 60.13(a)
CEMS Daily Calibration Drift (CD) Test: Check the zero (low level between 0 and 20 percent of the span value) and span (50 to 100 percent of the span value) calibration drifts at least once daily. The zero and span must, at a minimum, be adjusted whenever the drift exceeds two times the limit specified in 40 CFR part 60. Appendix F shall be used to determine out-of-control periods for CEMS.	40 CFR Part 60, Appendix F, Section 4.1; 40 CFR Section 60.13(d)(1); Minn. R. 7017.1170, subp. 3
Cylinder Gas Audit: due before end of each three out of four calendar quarters following Permit Issuance but no more than three quarters in succession. A CGA is not required during any calendar quarter in which a RATA was performed.	40 CFR Part 60, Appendix F, Section 5.1.2; Minn. R. 7017.1170, subp. 4
CEMs Relative Accuracy Test Audit (RATA): due before the end of every one out of four calendar quarters following Permit Issuance.	40 CFR Part 60, Appendix F, Section 5.1.1
Relative Accuracy Test Audit (RATA) Notification: due 30 days before CEMS Relative Accuracy Test Audit (RATA).	Minn. R. 7017.1180, subp. 2
Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	40 CFR Section 60.7(f)Minn. R. 7007.1130

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-11**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: GP 005 Opacity Monitors**Associated Items:** MR 006 Boiler 7 Opacity

MR 008 Boiler 9 Opacity

MR 012 Boiler 11 (Wood Fired) Opacity

What to do	Why to do it
REQUIREMENTS FOR ALL OPACITY MONITORS (See Table B for additional requirements)	hdr
All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data for each successive 6-minute period.	40 CFR Section 60.13(e)(1); 40 CFR Section 60.13(h); Minn. R. 7017.1200, subp. 1, 2 & 3
Continuous Operation: COMS must be operated and data recorded during all periods of emission unit operation including periods of emission unit start-up, shutdown, or malfunction except for periods of acceptable monitor downtime. This requirement applies whether or not a numerical emission limit applies during these periods. A COMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment. Acceptable monitor downtime includes reasonable periods as listed in Items A, B, C and D of Minn. R. 7017.1090, subp. 2.	40 CFR Section 60.13(e); Minn. R. 7017.1090, subp. 1
Monitoring Data: All COMS data must be reduced to six-minute averages. A six-minute average is valid only if it contains data from at least five minutes within the averaging period. COMS data shall be reduced and calculated as outlined in Minn. R. 7017.1200, subp. 3.	Minn. R. 7017.1200, subp. 1, 2, and 3
QA Plan Required: Implement a written quality assurance plan which covers each COMS. The plan shall be on site and available for inspection within 30 days after monitor certification. The plan shall contain the written procedures listed in Minn. R. 7017.1210, subp. 1. The plan shall include the manufacturer's spare parts list for each COMS and require that those parts be kept at the facility unless the Commissioner gives written approval to exclude specific spare parts from the list.	Minn. R. 7017.1210, subp. 1
COMS QA/QC: The owner or operator of an affected facility is subject to the performance specifications listed in 40 CFR pt. 60, Appendix B and shall operate, calibrate, and maintain each COMS according to the QA/QC procedures in Minn. R. 7017.1210.	40 CFR Section 60.13(a); Minn. R. 7017.1210
COMS Daily Calibration Drift Check: The Calibration Drift shall be quantified and recorded at zero (low-level) and upscale (high-level) calibration drift at least once daily according to the procedures listed in 40 CFR Section 60.13(d)(2) and Part 60, Appendix B, PS 1. The zero and upscale calibration levels must be determined using the span value specified in the applicable requirement. If the applicable requirement does not specify a span value, as span value of 60, 70, or 80 percent opacity must be used unless an alternative span value is approved by the commissioner. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for COMS.	40 CFR Section 60.13(d)(1-2); Minn. R. 7017.1210, subp. 2
COMS Attenuator Calibration: The Permittee shall semiannually have an independent testing company conduct calibrations of each of the neutral density filters used in the calibration error audit according to the procedure in 40 CFR pt. 60, Appendix B.	Minn. R. 7017.1210, subp. 4
COMS Calibration Error Audit: due before end of each calendar half-year following Permit Issuance. Audits are to be at least three months apart but no more than eight months apart except that a calibration error audit need not be conducted during any semi-annual period in which the emission unit operated less than 24 hours. The calibration error audit shall be conducted according to the procedures in 40 CFR pt. 60, Appendix B, Performance Specification No. 1.	Minn. R. 7017.1210, subp. 3
Recordkeeping: The owner or operator must retain records of all COMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7017.1130

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-12**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: GP 006 Non-NSPS CEMS

Associated Items: MR 011 Boiler 11 (Wood Fired) NOx
 MR 013 Boiler 11 (Wood Fired) CO
 MR 014 Boiler 11 (Wood Fired) O2 (bias adjustment)
 MR 015 Boiler 7 CO2
 MR 016 Boiler 7 SO2
 MR 017 Boiler 9 CO2
 MR 018 Boiler 9 SO2

What to do	Why to do it
Additional requirements can be found in Table B.	hdr
<p>Continuous Operation: CEMS must be operated and data recorded during all periods of emission unit operation including periods of emission unit start-up, shutdown, or malfunction except for periods of acceptable monitor downtime. This requirement applies whether or not a numerical emission limit applies during these periods. A CEMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment. No data record is required for the diluent monitors.</p> <p>Acceptable monitor downtime includes reasonable periods as listed in Items A, B, C and D of Minn. R. 7017.1090, subp. 2.</p>	Minn. R. 7017.1090, subp. 1
<p>Monitoring Data: All data points collected by a CEMS shall be used to calculate individual hourly emission averages unless another applicable requirement requires more frequent averaging. In order for an hour of data to be considered, it must contain the following minimum number of data points:</p> <p>A. four data points, equally spaced, if the emission unit operated during the entire hour;</p> <p>B. two data points, at least 15 minutes apart, during periods of monitor calibration or routine maintenance;</p> <p>C. one data point if the emission unit operated for 15 minutes or less during the hour.</p>	Minn. R. 7017.1160, subp. 1 and 2
QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan shall be on site and available for inspection within 30 days after monitor certification. The plan shall contain all of the information required by 40 CFR Part 60, Appendix F, section 3. The plan shall include the manufacturer's spare parts list for each CEMS and require that those parts be kept at the facility unless the Commissioner gives written approval to exclude specific spare parts from the list.	Minn. R. 7017.1170, subp. 2
Requirement: CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily according to the procedures listed in Minn. R. 7017.1170, subp. 3(A) and 40 CFR Section 60.13(d)(1) for each pollutant concentration, each diluent monitor, and for each monitor range. The CEMS shall be adjusted whenever the CD exceeds twice the specification of 40 CFR pt. 60, Appendix B. If no span value is specified in the applicable requirement or in a compliance document, the Permittee shall use a span value equivalent to 1.5 times the emission limit. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for CEMS. Follow the procedures in 40 CFR pt. 60, Appendix F.	Minn. R. 7017.1170, subp. 3
Cylinder Gas Audit: due before end of each calendar half-year following CEM Certification Test, except that a CGA is not required during any calendar half year in which a RATA was performed. The CGAs shall be conducted at least three months apart but no more than eight months apart. A CGA shall be conducted according to the procedures in 40 CFR pt. 60, Appendix F, section 5.1.2. If the monitored emission unit was operated for less than 24 hours during the calendar half year, a CGA is not required for that calendar half year.	Minn. R. 7017.1170, subp. 4
CEMs Relative Accuracy Test Audit (RATA): due before end of each calendar year following CEM Certification Test. A RATA is not required in any calendar year if a RATA conducted in the previous year demonstrated a relative accuracy value of less than 15 percent or if the associated emissions unit operated less than 48 hours during the calendar year. If the exception is used, the next RATA shall be conducted during the first half of the following calendar year. RATAs shall be conducted at least 3 months apart according to 40 CFR pt. 60, Appendix F, section 5.1.1.C	Minn. R. 7017.1170, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-13**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Relative Accuracy Test Audit (RATA) Notification: due 30 days before CEMS Relative Accuracy Test Audit (RATA).	Minn. R. 7017.1180, subp. 2
Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7007.1130

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-14**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: GP 007 Enclosed Wood Unloading System**Associated Items:** CE 010 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 007 Enclosed Wood Unloading

EU 017 Bucket Elevator

EU 018 Conveyor 2

SV 006 Enclosed Wood Unloading Area

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Total Particulate Matter: less than or equal to 0.0020 grains/dry standard cubic foot at the stack (SV006).	Title I Condition: 40 CFR Section 52.21(j) BACT; Minn. R. 7007.3000
PM < 10 micron: less than or equal to 0.0020 grains/dry standard cubic foot at the stack (SV006).	Title I Condition: 40 CFR Section 52.21(j) BACT; Minn. R. 7007.3000
Opacity: less than or equal to 0 percent opacity at the stack (SV006).	Title I Condition: 40 CFR Section 52.21(j) BACT Limit; Minn. R. 7007.3000
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)
CONTROL REQUIREMENTS	hdr
The Permittee shall operate and maintain the fabric filter (CE010) at all times that any emission unit controlled by the fabric filter is in operation. The Permittee shall document periods of non-operation of the control equipment when the emission unit is in operation.	Title I Condition: 40 CFR Section 52.21(j) BACT; Minn. R. 7007.3000
See Subject Item GP003 for specific fabric filter operating requirements.	
PERFORMANCE TESTING	hdr
Performance Test: due before end of each 60 months starting 10/03/2007, to measure PM10 and opacity of emissions from SV006. The emissions tests shall be conducted at an interval not to exceed 60 months between test dates. The next test is due before 10/31/2012.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-15**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: GP 008 Wood Conveying System**Associated Items:** CE 013 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 009 Wood Conveyor System

EU 019 Conveyor 3

SV 009 Wood Conveyor

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Total Particulate Matter: less than or equal to 0.0020 grains/dry standard cubic foot at the stack (SV009).	Title I Condition: 40 CFR Section 52.21(j) BACT; Minn. R. 7007.3000
PM < 10 micron: less than or equal to 0.0020 grains/dry standard cubic foot at the stack (SV009).	Title I Condition: 40 CFR Section 52.21(j) BACT; Minn. R. 7007.3000
Opacity: less than or equal to 0 percent at the stack (SV009).	Title I Condition: 40 CFR Section 52.21(j) BACT; Minn. R. 7007.3000
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)
CONTROL REQUIREMENTS	hdr
The Permittee shall operate and maintain the fabric filter (CE013) at all times that any emission unit controlled by the fabric filter is in operation. The Permittee shall document periods of non-operation of the control equipment when the emission unit is in operation.	Title I Condition: 40 CFR Section 52.21(j) BACT; Minn. R. 7007.3000
See Subject Item GP003 for specific fabric filter operating requirements.	
PERFORMANCE TESTING	hdr
Initial Performance Test: due before 10/31/2012, to measure PM10 and opacity of emissions from SV009.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-16**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: GP 009 Wood Transfer/Metering Bin System**Associated Items:** CE 014 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 010 Wood Transfer/Metering Bin

EU 020 Conveyor 4

EU 021 Conveyor 5

SV 010 Wood Transfer Metering Bin

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Total Particulate Matter: less than or equal to 0.0020 grains/dry standard cubic foot at the stack (SV010).	Title I Condition: 40 CFR Section 52.21(j) BACT; Minn. R. 7007.3000
PM < 10 micron: less than or equal to 0.0020 grains/dry standard cubic foot at the stack (SV010).	Title I Condition: 40 CFR Section 52.21(j) BACT; Minn. R. 7007.3000
Opacity: less than or equal to 0 percent at the stack (SV010).	Title I Condition: 40 CFR Section 52.21(j) BACT; Minn. R. 7007.3000
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)
CONTROL REQUIREMENTS	hdr
The Permittee shall operate and maintain the fabric filter (CE014) at all times that any emission unit controlled by the fabric filter is in operation. The Permittee shall document periods of non-operation of the control equipment when the emission unit is in operation.	Title I Condition: 40 CFR Section 52.21(j) BACT; Minn. R. 7007.3000
See Subject Item GP003 for specific fabric filter operating requirements.	
PERFORMANCE TESTING	hdr
Initial Performance Test: due before 10/31/2012, to measure PM10 and opacity of emissions from SV010.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Virginia Department of Public Utilities
Permit Number: 13700028 - 010

Subject Item: GP 010 Ash Loadout
Associated Items: FS 005 Wood Ash Loadout
FS 006 Coal Fly Ash Loadout

What to do	Why to do it
Ash shall be wetted prior to loadout.	Title I Condition: 40 CFR Section 52.21(k) Ambient Impacts Analysis

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-18**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: EU 001 Boiler #7

Associated Items: CE 001 Centrifugal Collector - Medium Efficiency
 CE 002 Electrostatic Precipitator - High Efficiency
 GP 001 Boilers 7 and 9 SO2 limits
 GP 002 Boilers 7, 9, and 10 and makeup air heater NOx cap
 MR 006 Boiler 7 Opacity
 MR 015 Boiler 7 CO2
 MR 016 Boiler 7 SO2
 SV 002 Boiler No. 7

What to do	Why to do it
EMISSION AND OPERATING LIMITS [See Subject Items GP001 and GP002 for additional applicable emission limits for sulfur dioxide and nitrogen oxides.]	hdr
Total Particulate Matter: less than or equal to 0.60 lbs/million Btu heat input using 3-hour Average	Minn. R. 7011.0510, subp. 1
PM < 10 micron: less than or equal to 0.30 lbs/million Btu heat input using 3-hour Average	Title I Condition: 40 CFR 52.21(k); Minn. R. 7007.3000
Sulfur Dioxide: less than or equal to 4.0 lbs/million Btu heat input using 3-hour Average when combusting coal	Minn. R. 7011.0510, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. An exceedance of this opacity standard occurs whenever any one-hour period contains two or more six-minute periods during which the average opacity exceeds 20 percent or whenever any one-hour period contains one or more six-minute periods during which the average opacity exceeds 60 percent.	Minn. R. 7011.0510, subp. 2
Steam Flow: less than or equal to 79420 lbs/hour using 8-hour Block Average , unless a new limit is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA- approved performance test where compliance was demonstrated. The new limit shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The limit is final upon issuance of a permit amendment incorporating the change. Readings shall be taken every 15 minutes of operation and used to calculate the 8-Hour Block Average. The readings may be taken from the SO2 CEMS data, or may be independently taken.	Minn. R. 7017.2025, subp. 3; Minn. R. 7017.2025, subp. 3a
Fuels Allowed: subbituminous coal, and bituminous coal. (Natural gas was removed as an allowable fuel, at the request of the Permittee.)	Minn. R. 7007.0800, subp. 2
Comply with 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, as promulgated and amended.	40 CFR Part 63, Subpart DDDDD
CONTROL REQUIREMENTS (See Subject Items CE001 and CE002 for additional control equipment operating requirements, including CAM requirements)	hdr
The Permittee shall operate and maintain the electrostatic precipitator (CE002) any time that EU001 is in operation, within the manufacturer's printed guidelines. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
The Permittee shall operate and maintain CE 001 any time that EU001 is in operation. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
The Permittee shall operate and maintain CE002 such that it achieves an overall control efficiency for PM < 10 micron: greater than or equal to 95 percent control efficiency	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
The Permittee shall operate and maintain CE002 such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 95 percent control efficiency	Minn. R. 7007.0800, subp. 2
MONITORING REQUIREMENTS	hdr
Emission Monitoring: The Permittee shall use a COMS on SV 002 to measure opacity emissions from EU001. See Subject Item GP005 and Table B for specific COMS requirements.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-19**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Emissions Monitoring: The Permittee shall use a SO ₂ CEMS on SV002 to measure SO ₂ emissions from EU001. See Subject Item GP006 and Table B for specific CEMS requirements.	Minn. R. 7007.0800, subp. 2
RECORDKEEPING	hdr
Fuel Usage Recordkeeping: by the 15th day of each month, the Permittee shall record the EU 001 fuel usage (for each permitted fuel) for the previous calendar month. The monthly values shall be used in the NO _x emissions calculation equation (Equation 1) in the total facility section of this permit.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 5
Each day, calculate and record the three (3) 8-hour block average steam flows for the previous day. A day may be defined as a calendar day, or as another 24 hour period of the Permittee's choice. However it is defined, it must be consistently used in that way for the boiler.	Minn. R. 7007.0800, subp. 2
PERFORMANCE TESTING	hdr
Performance Test: due before end of each 60 months starting 12/09/2005 to measure Total Particulate Matter emissions while burning coal. The tests shall be conducted at an interval not to exceed 60 months between test dates. The next test is due before 11/30/2015.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months starting 12/09/2005 for PM ₁₀ emissions while burning coal. The tests shall be conducted at an interval not to exceed 60 months between test dates. The next test is due before 11/30/2015.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Performance Test: due before end of each 24 months starting 01/01/2007 to measure NO _x emissions while burning coal. The NO _x tests is for the purpose of determining the NO _x emission factor (EF ₁) for use in Equation 1 in the GP002 section of the permit. The next test is due before October 31, 2012.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Boiler Alternative Operating Conditions for Performance Testing: Alternative Operating Conditions during testing are defined as 90% to 100% of the boiler's maximum normal (continuous) operating load or the maximum permitted operating rate, whichever is lower. The basis for this number must be included in the test plan. If testing is conducted at the alternative operating condition established, an operating limit will not be established as a result of performance testing. In no case will the new operating rate limit be higher than allowed by an existing permit condition.	Minn. R. 7017.2025, subp. 2(A) and 3(B)
Boiler Operating Conditions Not Meeting the Alternative Operating Conditions During Performance Testing: If performance testing is not conducted at or above the established alternative operating condition, then the boiler operating rate will be limited on an 8-hour block average based on the following: (1) If the results of the performance test are greater than 80% of any applicable emission limit for which compliance is demonstrated, then boiler operation will be limited to the tested operating rate. (2) If results are less than or equal to 80% of all applicable emission limits for which compliance is demonstrated, boiler operation will be limited to 110% of the tested operating rate. In no case will the new operating rate limit be higher than allowed by an existing permit condition.	Minn. R. 7017.2025, subp. 3(B)
STET (Short Term Emergency and Testing) Operating hours limit: The boiler may operate up to 40 hours per year to demonstrate the Uniform Rating of Generating Equipment (URGE) capacity and to meet emergency energy supply needs. Maintain documentation of all STET operation to demonstrate compliance with this limit. The boiler must meet emission limits during STET operation.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-20**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

<p>STET Operation Definition that applies to Boilers that Meet or do Not Meet the Alternative Operating Condition for Performance Testing:</p> <p>If performance test results demonstrate compliance at 80% or less of any applicable emission limits for any tested pollutant, STET operation is defined as operation beyond 110% of the average operating rate achieved during that performance test.</p> <p>If performance test results demonstrate compliance at greater than 80% of any applicable emission limit for any tested pollutant, STET operation is defined as operation beyond 100% of the average operating rate achieved during that performance test.</p> <p>In no case will STET operation be higher than allowed by an existing permit condition.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>The results of a performance test are not final until issuance of a review letter by MPCA, unless specified otherwise by Minn. R. 7017.2001-7017.2060.</p>	<p>Minn. R. 7017.2020, subp. 4</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-21**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: EU 003 Boiler #9

Associated Items: CE 003 Electrostatic Precipitator - High Efficiency

GP 001 Boilers 7 and 9 SO2 limits

GP 002 Boilers 7, 9, and 10 and makeup air heater NOx cap

MR 008 Boiler 9 Opacity

MR 017 Boiler 9 CO2

MR 018 Boiler 9 SO2

SV 003 Boiler No. 9

What to do	Why to do it
EMISSION AND FUEL TYPE LIMITS [See Subject Items GP001 and GP002 for additional applicable emission limits for sulfur dioxide and nitrogen oxides.]	hdr
Total Particulate Matter: less than or equal to 0.60 lbs/million Btu heat input using 3-hour Average	Minn. R. 7011.0510, subp. 1
PM < 10 micron: less than or equal to 0.30 lbs/million Btu heat input using 3-hour Average	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
Sulfur Dioxide: less than or equal to 4.0 lbs/million Btu heat input using 3-hour Average when combusting coal	Minn. R. 7011.0510, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. An exceedance of this opacity standard occurs whenever any one-hour period contains two or more six-minute periods during which the average opacity exceeds 20 percent or whenever any one-hour period contains one or more six-minute periods during which the average opacity exceeds 60 percent.	Minn. R. 7011.0510, subp. 2
Fuels Allowed: subbituminous coal, bituminous coal, and oily cellulose-based sorbents (including oily rags).	Minn. R. 7007.0800, subp. 2
Fuel Usage: less than or equal to 500 lbs/year using 12-month Rolling Sum , of oily cellulose-based sorbents (including oily rags)	Minn. R. 7007.0800, subp. 2
Comply with 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, as promulgated and amended.	40 CFR Part 63, Subpart DDDDD
CONTROL REQUIREMENTS (See Subject Item CE003 for additional control equipment operating requirements, including CAM requirements)	hdr
The Permittee shall operate and maintain the electrostatic precipitator (CE003) any time that EU003 is in operation, within the manufacturer's printed guidelines. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for PM < 10 micron: greater than or equal to 95 percent control efficiency	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 95 percent control efficiency	Minn. R. 7007.0800, subp. 2
CONTINUOUS MONITORING REQUIREMENTS	hdr
Emission Monitoring: The Permittee shall use a COMS to measure opacity emissions from EU003. See Subject Item GP005 and Table B for specific COMS requirements.	Minn. R. 7007.0800, subp. 2
Emissions Monitoring: The Permittee shall use a SO2 CEMS to measure SO2 emissions from EU003. See Subject Item GP006 and Table B for specific CEMS operating requirements.	Minn. R. 7007.0800, subp. 2
RECORDKEEPING	hdr
Fuel Usage Recordkeeping: by the 15th day of each month the Permittee shall record the type and quantity of fuels burned in EU003 during the previous month. The monthly records for coal shall be used in the NOx emission calculation equation (Equation 1) in the total facility section of this permit.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 5
By the 15th day of each month, calculate the quantity of oily cellulose-based sorbents combusted during the previous 12 months.	Minn. R. 7007.0800, subp. 2
PERFORMANCE TESTING REQUIREMENTS	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-22**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Performance Test: due before end of each 60 months starting 12/09/2005 for PM10 emissions. The tests shall be conducted at an interval not to exceed 60 months between test dates. The next test is due before 9/30/2015.	Title I Condition: 40 CFR 52.21(k); Minn. R. 7007.3000
Performance Test: due before end of each 60 months starting 12/09/2005 to measure Total Particulate Matter emissions. The tests shall be conducted at an interval not to exceed 60 months between test dates. The next test is due before 9/30/2015.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 24 months starting 02/07/2006 to measure NOx emissions while burning coal. The NOx test is for the purpose of determining the NOx emission factor (EF3) for use in Equation 1 in the GP002 section of the permit. The next test is due before 1/31/2012.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000;
Boiler Alternative Operating Conditions for Performance Testing: Alternative Operating Conditions during testing are defined as 90% to 100% of the boiler's maximum normal (continuous) operating load or the maximum permitted operating rate, whichever is lower. The basis for this number must be included in the test plan. If testing is conducted at the alternative operating condition established, an operating limit will not be established as a result of performance testing. In no case will the new operating rate limit be higher than allowed by an existing permit condition.	Minn. R. 7017.2025, subp. 2(A) and 3(B)
Boiler Operating Conditions Not Meeting the Alternative Operating Conditions During Performance Testing: If performance testing is not conducted at or above the established alternative operating condition, then the boiler operating rate will be limited on an 8-hour block average based on the following: (1) If the results of the performance test are greater than 80% of any applicable emission limit for which compliance is demonstrated, then boiler operation will be limited to the tested operating rate. (2) If results are less than or equal to 80% of all applicable emission limits for which compliance is demonstrated, boiler operation will be limited to 110% of the tested operating rate. In no case will the new operating rate limit be higher than allowed by an existing permit condition.	Minn. R. 7017.2025, subp. 3(B)
STET (Short Term Emergency and Testing) Operating hours limit: The boiler may operate up to 40 hours per year to demonstrate the Uniform Rating of Generating Equipment (URGE) capacity and to meet emergency energy supply needs. Maintain documentation of all STET operation to demonstrate compliance with this limit. The boiler must meet emission limits during STET operation.	Minn. R. 7007.0800, subp. 2
STET Operation Definition that applies to Boilers that Meet or do Not Meet the Alternative Operating Condition for Performance Testing: If performance test results demonstrate compliance at 80% or less of any applicable emission limits for any tested pollutant, STET operation is defined as operation beyond 110% of the average operating rate achieved during that performance test. If performance test results demonstrate compliance at greater than 80% of any applicable emission limit for any tested pollutant, STET operation is defined as operation beyond 100% of the average operating rate achieved during that performance test. In no case will STET operation be higher than allowed by an existing permit condition.	Minn. R. 7007.0800, subp. 2
The results of a performance test are not final until issuance of a review letter by MPCA, unless specified otherwise by Minn. R. 7017.2001-7017.2060.	Minn. R. 7017.2020, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-23**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: EU 004 Boiler #10

Associated Items: CE 004 Modified Furnace or Burner Design
 CE 005 Flue Gas Recirculation
 CE 006 Low Excess - Air Firing
 GP 002 Boilers 7, 9, and 10 and makeup air heater NOx cap
 MR 005 Boiler 10 NOx
 MR 010 Boiler 10 CO2 (bias adjustment)
 SV 004 Natural Gas Boiler 10

What to do	Why to do it
EMISSION AND FUEL TYPE LIMITS	hdr
Total Particulate Matter: less than or equal to 0.030 lbs/million Btu heat input . This limit applies at all times except during periods of startup, shutdown, or malfunction. Based on equipment capacity and allowed fuels, PTE is approximately 0.0075 lb/MMBtu.	40 CFR Section 60.42Da(a)(1); 40 CFR Section 60.48Da(c); Minn. R. 7011.0560
Opacity: less than or equal to 20 percent opacity using 6 Minute Average except for one 6-minute period per hour of not more than 27 percent opacity.	40 CFR Section 60.42Da(b); Minn. R. 7011.0560
Sulfur Dioxide: less than or equal to 0.20 lbs/million Btu heat input using 30-day Rolling Average . This limit applies at all times except during periods of startup or shutdown. Based on equipment capacity and allowed fuels, PTE is approximately 0.0006 lb/MMBtu.	40 CFR Section 60.43Da(b)(2); 40 CFR Section 60.48Da(c); Minn. R. 7011.0560
Nitrogen Oxides: less than or equal to 0.20 lbs/million Btu heat input using 30-day Rolling Average . This limit applies at all times except during periods of startup, shutdown, or malfunction.	40 CFR Section 60.44Da(a)(1); 40 CFR Section 60.48Da(c); Minn. R. 7011.0560
Nitrogen Oxides: less than or equal to 0.10 lbs/million Btu heat input using 30-day Rolling Average	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Fuels Allowed: Natural gas only.	Minn. R. 7007.0800, subp 2
Comply with 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, as promulgated and amended.	40 CFR Part 63, Subpart DDDDD
CONTINUOUS EMISSIONS MONITORING	hdr
Emissions Monitoring: The Permittee shall use a NOx CEMS to measure NOx emissions from EU 004, and record the output of the system. See Subject Item GP004 and Table B for specific CEMS requirements.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000; 40 CFR Section 60.49Da(c); Minn. R. 7011.0560
Emissions Monitoring: The owner or operator shall operate and maintain a CO2 or O2 analyzer at the location of the NOx CEMS, and record the output of the NOx CEMS. See Subject Item GP004 and Table B for specific CEMS requirements.	40 CFR Section 60.49Da(d); Minn. R. 7011.0560
RECORDKEEPING	hdr
Recordkeeping: The owner or operator must retain records of all CEMS/COMS monitoring data and support information for a period of five (5) years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	40 CFR Section 60.7(f); Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-24**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: EU 005 Makeup Air Heater**Associated Items:** GP 002 Boilers 7, 9, and 10 and makeup air heater NOx cap

MR 005 Boiler 10 NOx

MR 010 Boiler 10 CO2 (bias adjustment)

SV 004 Natural Gas Boiler 10

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0610, subp. 1(A)(1)
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0610, subp. 1(A)(2)
Fuels Allowed: Natural gas only.	Minn. R. 7007.0800, subp 2

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-25**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: EU 006 Boiler #11 (Wood Fired)**Associated Items:** CE 007 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

CE 008 Selective Noncatalytic Reduction for NOX

CE 009 Electrostatic Precipitator - High Efficiency

MR 011 Boiler 11 (Wood Fired) NOx

MR 012 Boiler 11 (Wood Fired) Opacity

MR 013 Boiler 11 (Wood Fired) CO

MR 014 Boiler 11 (Wood Fired) O2 (bias adjustment)

SV 005 Boiler #11 (Wood Fired)

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.030 lbs/million Btu heat input using 3-hour Average . This limit applies at all times except during times of startup, shutdown or malfunction.	40 CFR Section 60.43b(h)(1); Minn. R. 7011.0565
Total Particulate Matter: less than or equal to 0.025 lbs/million Btu heat input using 3-hour Average	Title I Condition: 40 CFR Section 52.21(j) (BACT) and Minn. R. 7007.3000
PM < 10 micron: less than or equal to 0.025 lbs/million Btu heat input using 3-hour Average	Title I Condition: 40 CFR Section 52.21(j) (BACT) and Minn. R. 7007.3000
PM < 10 micron: less than or equal to 0.019 lbs/million Btu heat input using 3-hour Average	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
PM < 2.5 micron: less than or equal to 0.014 lbs/million Btu heat input using 3-hour Average	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
Carbon Monoxide: less than or equal to 280 tons using 365-day Rolling Sum	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
Carbon Monoxide: less than or equal to 0.58 lbs/million Btu heat input using 8-hour Block Average . "Eight-hour block average" means the average of all hourly emission rates when the emissions unit is operating over three discrete eight-hour periods beginning at midnight.	Title I Condition: 40 CFR Section 52.21(j) (BACT) and Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 0.15 lbs/million Btu heat input based on a 30-day rolling average.	Title I Condition: 40 CFR Section 52.21(j) (BACT) and Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 120 tons using 365-day Rolling Sum	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
Opacity: less than or equal to 20 percent based on a 6-minute average, except for one 6-minute period per hour of not more than 27 percent opacity. This limit applies at all times, except during periods of startup, shutdown or malfunction.	40 CFR Section 60.43b(f); Minn. R. 7011.0565
OPERATING LIMITS	hdr
Steam Flow: less than or equal to 123,304 lbs/hour using 8-hour Block Average , unless a new limit is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA- approved performance test where compliance was demonstrated. The new limit shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The limit is final upon issuance of a permit amendment incorporating the change. Readings shall be taken every 15 minutes of operation and used to calculate the 8-Hour Block Average for the wood fired boiler.	Minn. R. 7017.2025, subp. 3

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-26**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Ammonia Slip: Limited to less than or equal to 25 ppm. If the ammonia slip exceeds this level, the SNCR system shall be adjusted to reduce the ammonia slip to less than 25 ppm, or shut down until repairs are made and normal operating conditions are achieved.	Minn. R. 7007.0800, subp. 2
Compliance shall be determined by monitoring the injection temperature and reagent feed rate. The minimum temperature window and maximum feed rate shall be determined by the performance testing required below.	
Fuel use limited to untreated wood, such as, but not limited to, logging waste, trees, brush, etc. Untreated wood is defined as any wood that has not been subject to any chemical treatment or coating. Examples are: 1) untreated residuals from manufacturing processes such as furniture, cabinet, and pallet making and other wood product manufacture; 2) construction waste; 3) urban and park tree trimming and forest residuals; 4) wood from trees downed by storms; 5) trees removed for urban development; 6) trees grown specifically to be used as fuel; and 7) trees removed as part of a timber management plan.	Minn. R. 7007.0800, subp. 2
Comply with 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, as promulgated and amended.	40 CFR Part 63, Subpart DDDDD
At all times, including periods of startup, shutdown, and malfunction, owners or operators shall, to the extent practical, maintain and operate EU 006 (the affected facility), including the associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions.	40 CFR Section 60.11(d)
CONTROL REQUIREMENTS (See Subject Items CE007, CE008, and CE009 for additional control equipment operating requirements, including CAM requirements)	hdr
The Permittee shall operate and maintain the control equipment (CE007 and CE008) at any time that EU006 is in operation. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: 40 CFR Section 52.21(j) (BACT) and Minn. R. 7007.3000
The Permittee shall operate and maintain the electrostatic precipitator (CE009) any time that EU006 is in operation, within the manufacturer's printed guidelines. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: 40 CFR Section 52.21(j) (BACT) and Minn. R. 7007.3000
The Permittee shall operate and maintain CE009 such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 96 percent control efficiency	Title I Condition: 40 CFR Section 52.21(j) (BACT) and Minn. R. 7007.3000
The Permittee shall operate and maintain CE009 such that it achieves an overall control efficiency for PM < 10 micron: greater than or equal to 95 percent control efficiency	Title I Condition: 40 CFR Section 52.21(j) (BACT) and Minn. R. 7007.3000
The Permittee shall operate and maintain CE009 such that it achieves an overall control efficiency for PM < 2.5 micron: greater than or equal to 94 percent control efficiency	Minn. R. 7007.0800, subp. 2
CONTINUOUS MONITORING REQUIREMENTS	hdr
Install, maintain, and operate a continuous monitor to measure the CO emissions. See Subject Item GP006 and Table B for specific CEMS requirements.	Title I Condition: 40 CFR Section 52.21(j) (BACT) and Minn. R. 7007.3000
Install, maintain, and operate a continuous monitor to measure the opacity of stack emissions. See Subject Item GP005 and Table B for specific COMS requirements.	40 CFR Section 60.48b(a); Minn. R. 7011.0565; Minn. R. 7017.0200
Install, operate and maintain a continuous monitor to measure stack nitrogen oxides emissions. Installation, operation and maintenance shall be in accordance with 40 CFR Section 60.15 and 40 CFR 60, Appendix B. See Subject Item GP004 and Table for specific CEMS requirements.	Title I Condition: 40 CFR Section 52.21 (BACT) and Minn. R. 7007.3000; Minn. R. 7017.0200
RECORDKEEPING	hdr
Keep all records readily available and on site for a period of 5 years.	40 CFR Section 60.7(b)
Maintain relevant records of each startup, shutdown, or malfunction of operation equipment and the occurrence and duration of each malfunction of the required air pollution control and monitoring equipment.	

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-27**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection.	40 CFR Section 60.7(f)
CO Calculation and Recordkeeping - Rolling Sum. The Permittee shall calculate and record the CO emissions from EU 006 (SV 005) for each day and the previous 364 days (365-day rolling sum). All CO emissions from EU 006 shall be included in the calculation of the rolling sum.	Title I Condition: To avoid classification as major modification under 40 CFR 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR 52.21; Minn. R. 7007.0800, subps. 2, 4 and 5
NOx Calculation and Recordkeeping - Rolling Sum. The Permittee shall calculate and record the NOx emissions from EU 006 (SV 005) for each day and the previous 364 days (365-day rolling sum). All NOx emissions from EU 006 shall be included in the calculation of the rolling sum.	Title I Condition: To avoid classification as major modification under 40 CFR 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR 52.21; Minn. R. 7007.0800, subps. 2, 4 and 5
Steam Flow Calculation and Recordkeeping. Each day, calculate and record the three (3) 8-hour block average steam flows for the previous day. A day may be defined as a calendar day, or as another 24 hour period of the Permittee's choice. However it is defined, it must be consistently used in that way for the boiler.	Minn. R. 7007.0800, subp. 2
PERFORMANCE TESTING	hdr
Performance Test: due before end of each 60 months starting 02/23/2012 to measure PM emissions from EU 006. The performance tests shall be conducted at an interval not to exceed 60 months between tests. The next test required under this condition shall be conducted by 02/23/2017.	Title I Condition: 40 CFR 52.21(j) (BACT) and Minn. R. 7007.3000; 40 CFR Section 60.43b(c)(1); Minn. R. 7011.0565
Performance Test: due before end of each 60 months starting 02/23/2012 to measure PM10 emissions from EU 006. The performance tests shall be conducted at an interval not to exceed 60 months between tests. The next test required under this condition shall be conducted by 02/23/2017.	Title I Condition: 40 CFR 52.21(j) (BACT) and Minn. R. 7007.3000
Initial Performance Test: due 180 days after Permit Issuance to measure PM2.5 emissions from EU 006.	Minn. R. 7017.2020, subp. 1; Minn. R. 7007.0800, subp. 5
Performance Test: due before end of each 24 months starting 11/19/2009 for Ammonia Slip. Test must be conducted simultaneously with a PM10/PM2.5 test. The next test is due before 11/30/2011.	Minn. R. 7007.0800, subp. 2
Performance tests and procedures under 40 CFR Section 60.46b(d) must be followed.	40 CFR Section 60.46b(d-e); Minn. R. 7011.0565
Boiler Alternative Operating Conditions for Performance Testing: Alternative Operating Conditions during testing are defined as 90% to 100% of the boiler's maximum normal (continuous) operating load or the maximum permitted operating rate, whichever is lower. The basis for this number must be included in the test plan. If testing is conducted at the alternative operating condition established, an operating limit will not be established as a result of performance testing. In no case will the new operating rate limit be higher than allowed by an existing permit condition.	Minn. R. 7017.2025, subp. 2(A) and 3(B)
Boiler Operating Conditions Not Meeting the Alternative Operating Conditions During Performance Testing: If performance testing is not conducted at or above the established alternative operating condition, then the boiler operating rate will be limited on an 8-hour block average based on the following: (1) If the results of the performance test are greater than 80% of any applicable emission limit for which compliance is demonstrated, then boiler operation will be limited to the tested operating rate. (2) If results are less than or equal to 80% of all applicable emission limits for which compliance is demonstrated, boiler operation will be limited to 110% of the tested operating rate. In no case will the new operating rate limit be higher than allowed by an existing permit condition.	Minn. R. 7017.2025, subp. 3(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-28**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

<p>STET (Short Term Emergency and Testing) Operating hours limit:</p> <p>The boiler may operate up to 40 hours per year to demonstrate the Uniform Rating of Generating Equipment (URGE) capacity and to meet emergency energy supply needs. Maintain documentation of all STET operation to demonstrate compliance with this limit. The boiler must meet emission limits during STET operation.</p>	Minn. R. 7007.0800, subp. 2
<p>STET Operation Definition that applies to Boilers that Meet or do Not Meet the Alternative Operating Condition for Performance Testing:</p> <p>If performance test results demonstrate compliance at 80% or less of any applicable emission limits for any tested pollutant, STET operation is defined as operation beyond 110% of the average operating rate achieved during that performance test.</p> <p>If performance test results demonstrate compliance at greater than 80% any applicable emission limit for any tested pollutant, STET operation is defined as operation beyond 100% of the average operating rate achieved during that performance test.</p> <p>In no case will STET operation be higher than allowed by an existing permit condition.</p>	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-29**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: CE 001 Centrifugal Collector - Medium Efficiency**Associated Items:** EU 001 Boiler #7

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
The Permittee shall operate and maintain the collector in accordance with the O & M Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
RECORDKEEPING AND MONITORING REQUIREMENTS	hdr
Periodic Inspections: At least semiannually, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subps. 4, 5 & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-30**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: CE 002 Electrostatic Precipitator - High Efficiency**Associated Items: EU 001 Boiler #7**

What to do	Why to do it
Operation and Maintenance of ESP: The Permittee shall operate and maintain the ESP in accordance with the O & M Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and review by MPCA staff.	40 CFR Section 64.7(b); Minn. R. 7017.0200
The Permittee shall record the total power input to CE002 once each day of operation of EU001. If the total power input is below the minimum described below, take corrective action (as outlined in the O&M Plan for the facility) within 24 hours of discovery to return to the minimum power input. This is considered an excursion as defined in 40 CFR Section 64.1. Make a record of all corrective actions taken.	Title I Condition: 40 CFR Section 52.21(k) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 5.
Total Power Input: greater than or equal to 6.0 kilowatts using 3-hour Block Average , unless a new minimum total power input is required to be set pursuant to Minn. R. 7017.2025, subp. 3. If a new minimum power input is required to be set, it will be based on the average power input recorded during the most recent MPCA approved performance test where compliance for Total Particulate Matter and/or Particulate Matter less than 10 microns emissions was demonstrated. If the three-hour rolling average total secondary power input drops below the minimum limit, this shall be reported as a deviation.	Title I Condition: 40 CFR Section 52.21(k) and Minn. R. 7007.3000; Minn. R. 7017.20205, subp. 3; Minn. R. 7007.0800, subp. 5.
Opacity: less than or equal to 17.0 percent opacity using 3-hour Rolling Average . Opacity in excess of this limit shall be considered an excursion under 40 CFR Section 64.6(c)(2), for purposes of the PM limit for EU001. This applies for all types and qualities of fuel burned in EU001.	40 CFR Section 64.3; Minn. R. 7017.0200
Opacity: less than or equal to 10.0 percent opacity using 3-hour Rolling Average . Opacity in excess of this limit shall be considered an excursion under 40 CFR Section 64.6(c)(2), for purposes of the PM10 limit for EU001. This applies for all types and qualities of fuel burned in EU001.	40 CFR Section 64.3; Minn. R. 7017.0200
Continuous Monitoring: The Permittee shall continuously, or at a minimum once every 15 minutes, monitor the opacity of the ESP exhaust. [See Subject Item GP005 for specific COMS operating requirements.]	40 CFR Section 64.4(b)(4)(ii); Minn. R. 7017.0200
Monitoring Equipment: The necessary monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required.	40 CFR Section 64.7(b); Minn. R. 7017.0200
Periodic Inspections: At least once per calendar quarter, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. If it is not possible to perform this inspection because the boiler experienced no downtime during the calendar quarter, this should be noted in the written inspection record.	40 CFR Section 64.3; Minn. R. 7017.0200
Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection.	40 CFR Section 64.3; Minn. R. 7017.0200
Annual Calibration: The Permittee shall calibrate the total power input monitor at least annually and shall maintain a written record of the calibration and any action resulting from the calibration.	40 CFR Section 64.3; Minn. R. 7017.0200
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the monitored opacity, averaged over any 3-hour period, exceeds 17%; or - the total power input is below the required operating level; or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range/level and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP.	40 CFR Section 64.7(d); Minn. R. 7017.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-31**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing opacity which is considered an excursion, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring changes.	40 CFR Section 64.7(e); Minn. R. 7017.0200
<p>As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit, and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64:</p> <p>1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and</p> <p>2) Summary information on the number, duration, and cause for monitor downtime incidents.</p>	40 CFR Section 64.7(a)(2); Minn. R. 7017.0200
The Permittee shall maintain records of monitoring data, monitor performance, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.	40 CFR Section 64.9(b); Minn. R. 7017.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-32**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: CE 003 Electrostatic Precipitator - High Efficiency**Associated Items: EU 003 Boiler #9**

What to do	Why to do it
Operation and Maintenance of ESP: The Permittee shall operate and maintain the ESP in accordance with the O & M Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and review by MPCA staff.	40 CFR Section 64.7(b); Minn. R. 7017.0200
The Permittee shall record the total power input to CE003 once each day of operation of EU003. If the total power input is below the minimum described below, take corrective action (as outlined in the O&M Plan for the facility) within 24 hours of discovery to return to the minimum power input. This is considered an excursion as defined in 40 CFR Section 64.1. Make a record of all corrective actions taken.	Title I Condition: 40 CFR Section 52.21(k) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 5.
Total Power Input: greater than or equal to 8.0 kilowatts using 3-hour Block Average , unless a new minimum total power input is required to be set pursuant to Minn. R. 7017.2025, subp. 3. If a new minimum power input is required to be set, it will be based on the average power input recorded during the most recent MPCA approved performance test where compliance for Total Particulate Matter and/or Particulate Matter less than 10 microns emissions was demonstrated. If the three-hour rolling average total secondary power input drops below the minimum limit, this shall be reported as a deviation.	Title I Condition: 40 CFR Section 52.21(k) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 5.
Opacity: less than or equal to 23.0 percent opacity using 3-hour Rolling Average . Opacity in excess of this limit shall be considered an excursion under 40 CFR Section 64.6(c)(2), for purposes of the PM limit for EU003. This applies for all types and qualities of fuel burned in EU003.	40 CFR Section 64.3; Minn. R. 7017.0200
Opacity: less than or equal to 29.0 percent opacity using 3-hour Rolling Average . Opacity in excess of this limit shall be considered an excursion under 40 CFR Section 64.6(c)(2), for purposes of the PM10 limit for EU003. This applies for all types and qualities of fuel burned in EU003.	40 CFR Section 64.3; Minn. R. 7017.0200
Continuous Monitoring: The Permittee shall continuously, or at a minimum once every 15 minutes, monitor the opacity of the ESP exhaust. [See Subject Item GP005 for specific COMS operating requirements.]	40 CFR Section 64.4(b)(4)(ii); Minn. R. 7017.0200
Monitoring Equipment: The necessary monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required.	40 CFR Section 64.7(b); Minn. R. 7017.0200
Periodic Inspections: At least once per calendar quarter, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. If it is not possible to perform this inspection because the boiler experienced no downtime during the calendar quarter, this should be noted in the written inspection record.	40 CFR Section 64.3; Minn. R. 7017.0200
Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection.	40 CFR Section 64.3; Minn. R. 7017.0200
Annual Calibration: The Permittee shall calibrate the total power input monitor at least annually and shall maintain a written record of the calibration and any action resulting from the calibration.	40 CFR Section 64.3; Minn. R. 7017.0200
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the monitored opacity, averaged over any 3-hour period, exceeds 23%; or - the total power input is below the required operating level; or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range/level and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP.	40 CFR Section 64.7(d); Minn. R. 7017.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-33**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing opacity which is considered an excursion, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring changes.	40 CFR Section 64.7(e); Minn. R. 7017.0200
<p>As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit, and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64:</p> <p>1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and</p> <p>2) Summary information on the number, duration, and cause for monitor downtime incidents.</p>	40 CFR Section 64.7(a)(2); Minn. R. 7017.0200
The Permittee shall maintain records of monitoring data, monitor performance, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.	40 CFR Section 64.9(b); Minn. R. 7017.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-34**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: CE 007 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones**Associated Items:** EU 006 Boiler #11 (Wood Fired)

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
The Permittee shall operate and maintain the collector in accordance with the O & M Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
RECORDKEEPING AND MONITORING REQUIREMENTS	hdr
Periodic Inspections: At least semiannually, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subps. 4, 5 & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-35**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: CE 008 Selective Noncatalytic Reduction for NOX**Associated Items:** EU 006 Boiler #11 (Wood Fired)

What to do	Why to do it
The Permittee shall operate and maintain the SNCR in accordance with the O & M Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	40 CFR Section 64.7(b); Minn. R. 7017.0200
The Permittee shall record the urea feed rate and injection temperature once each day of operation of EU006. If the feed rate is above the maximum listed in this permit, or if the temperature is below the minimum listed in this permit, take corrective action (as outlined in the O & M plan) within 24 hours of discovery. This is considered an excursion as defined in 40 CFR Section 64.1. Record the time and date of each reading and all corrective actions taken.	Title I Condition: 40 CFR 52.21(j)(BACT); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
Injection Temperature: greater than or equal to 80 degrees Fahrenheit using 3-hour Block Average, unless a new limit is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA- approved performance test where compliance was demonstrated. The new limit shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The limit is final upon issuance of a permit amendment incorporating the change.	Title I Condition: 40 CFR 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
Maximum Urea Feed Rate: less than or equal to 3.1 gallons/hr using 3-hour Block Average, unless a new limit is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new limit shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The limit is final upon issuance of a permit amendment incorporating the change.	Title I Condition: 40 CFR 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
The SNCR system will be adjusted or may be shut down when the ammonia slip exceeds the limit set at EU006, until such time as the system is returned to normal operation.	Minn. R. 7007.0800, subp. 2
SNCR monitoring: The NOX CEMS (MR011) for the emission unit (EU006) shall be used to assess proper operation of the SNCR.	40 CFR Section 64.7(a); Minn. R. 7007.0800, subp. 2; Minn. R. 7017.0200
Continuous Monitoring: The Permittee shall continuously, or at a minimum once every 15 minutes, monitor the NOX emissions in the exhaust. See Subject Item GP004 for specific CEMS operating requirements.	40 CFR Section 64.3(b)(4)(ii); Minn. R. 7017.0200
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording the Urea Feed Rate and Injection Temperature as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored SNCR is in operation.	40 CFR Section 64.7(b); Minn. R. 7017.0200
Periodic Inspections: At least semiannually, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	40 CFR Section 64.3; Minn. R. 7017.0200
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - The recorded urea feed rate is outside the required operating range; or - The recorded injection temperature is outside the required operating range; or - The SNCR or any of its components are found during the inspections to need repair. Corrective actions shall return the Urea feed rate to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O&M Plan for the SNCR. The Permittee shall keep a record of the type and date of any corrective action taken.	40 CFR Section 64.7(d); Minn. R. 7017.0200
Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing opacity which is considered an excursion, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring changes.	40 CFR Section 64.7(e); Minn. R. 7017.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-36**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

<p>As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit, and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64:</p> <p>1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and</p> <p>2) Summary information on the number, duration, and cause for monitor downtime incidents.</p>	40 CFR Section 64.7(a)(2); Minn. R. 7017.0200
<p>The Permittee shall maintain records of monitoring data, monitor performance, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.</p>	40 CFR Section 64.9(b); Minn. R. 7017.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-37**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Subject Item: CE 009 Electrostatic Precipitator - High Efficiency**Associated Items: EU 006 Boiler #11 (Wood Fired)**

What to do	Why to do it
Operation and Maintenance of ESP: The Permittee shall operate and maintain the ESP in accordance with the O & M Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and review by MPCA staff.	40 CFR Section 64.7(b); Minn. R. 7017.0200
The Permittee shall record the total power input to CE009 once each day of operation of EU006. If the total power input is below the minimum described below, take corrective action (as outlined in the O&M Plan for the facility) within 24 hours of discovery to return to the minimum power input. This is considered an excursion as defined in 40 CFR Section 64.1. Make a record of all corrective actions taken.	Title I Condition: 40 CFR Section 52.21(j) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 5.
Total Power Input: greater than or equal to 42.0 kilowatts using 3-hour Block Average , unless a new minimum total power input is required to be set pursuant to Minn. R. 7017.2025, subp. 3. If a new minimum power input is required to be set, it will be based on the average power input recorded during the most recent MPCA approved performance test where compliance for Total Particulate Matter and/or Particulate Matter less than 10 microns emissions was demonstrated. If the three-hour rolling average total secondary power input drops below the minimum limit, this shall be reported as a deviation.	Title I Condition: 40 CFR Section 52.21(j) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 5.
Opacity: less than or equal to 29.0 percent opacity using 3-hour Rolling Average . Opacity in excess of this limit shall be considered an excursion under 40 CFR Section 64.6(c)(2), for purposes of the PM limit for EU006. This applies for all types and qualities of fuel burned in EU006.	40 CFR Section 64.3; Minn. R. 7017.0200
Opacity: less than or equal to 26.0 percent . Opacity in excess of this limit shall be considered an excursion under 40 CFR Section 64.6(c)(2), for purposes of the PM10 limit for EU006. This applies for all types and qualities of fuel burned in EU006	40 CFR Section 64.3; Minn. R. 7017.0200
Opacity: less than or equal to 34.0 percent . Opacity in excess of this limit shall be considered an excursion under 40 CFR Section 64.6(c)(2), for purposes of the PM2.5 limit for EU006. This applies for all types and qualities of fuel burned in EU006	40 CFR Section 64.3; Minn. R. 7017.0200
Continuous Monitoring: The Permittee shall continuously, or at a minimum once every 15 minutes, monitor the opacity of the ESP exhaust. [See Subject Item GP005 for specific COMS operating requirements.]	40 CFR Section 64.4(b)(4)(ii); Minn. R. 7017.0200
Monitoring Equipment: The necessary monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required.	40 CFR Section 64.7(b); Minn. R. 7017.0200
Periodic Inspections: At least once per calendar quarter, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. If it is not possible to perform this inspection because the boiler experienced no downtime during the calendar quarter, this should be noted in the written inspection record.	40 CFR Section 64.3; Minn. R. 7017.0200
Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection.	40 CFR Section 64.3; Minn. R. 7017.0200
Annual Calibration: The Permittee shall calibrate the total power input monitor at least annually and shall maintain a written record of the calibration and any action resulting from the calibration.	40 CFR Section 64.3; Minn. R. 7017.0200
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the monitored opacity, averaged over any 3-hour period, exceeds 23%; or - the total power input is below the required operating level; or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range/level and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP.	40 CFR Section 64.7(d); Minn. R. 7017.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-38**

11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing opacity which is considered an excursion, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring changes.	40 CFR Section 64.7(e); Minn. R. 7017.0200
<p>As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit, and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64:</p> <p>1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and</p> <p>2) Summary information on the number, duration, and cause for monitor downtime incidents.</p>	40 CFR Section 64.7(a)(2); Minn. R. 7017.0200
The Permittee shall maintain records of monitoring data, monitor performance, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.	40 CFR Section 64.9(b); Minn. R. 7017.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Virginia Department of Public Utilities
Permit Number: 13700028 - 010

Subject Item: FS 009 Truck Traffic

What to do	Why to do it
<p>Under dry pavement conditions, if the temperature is less than 32 degrees F, sweeping of all traffic areas is required after every 32 trucks.</p> <p>Under dry pavement conditions, if the temperature is greater than 32 degrees F, sweeping and flushing are required after every 32 trucks.</p> <p>Sweeping and/or flushing is not required if the pavement is wet, or snow or ice covered.</p>	<p>Title I Condition: 40 CFR Section 52.21(k), Ambient Impacts Analysis</p>

TABLE B: SUBMITTALS

B-1 11/20/12

Facility Name: Virginia Department of Public Utilities
Permit Number: 13700028 - 010

Also, where required by an applicable rule or permit condition, send to the Permit Document Coordinator notices of:

- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

Send submittals that are required to be submitted to the U.S. EPA regional office to:

Mr. George Czerniak
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by parts 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue NW (6204N)
Washington, D.C. 20460

Send any application for a permit or permit amendment to:

Fiscal Services
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Table B lists most of the submittals required by this permit. Please note that some submittal requirements may appear in Table A or, if applicable, within a compliance schedule located in Table C. Table B is divided into two sections in order to separately list one-time only and recurrent submittal requirements.

Unless another person is identified in the applicable Table, send all other submittals to:

AQ Compliance Tracking Coordinator
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**B-2** 11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit.	Total Facility
Compliance Plan	<p>due 545 days after Permit Issuance for SO₂ NAAQS. The Permittee shall submit a plan that, when implemented, will allow the facility to achieve compliance with the 1-hour SO₂ National Ambient Air Quality Standard by June 3, 2018 unless required sooner by federal law.</p> <p>The plan shall contain (a) a description of any proposed physical changes to the facility and any proposed limits or permit changes; (b) refined modeling, consistent with those permit changes and consistent with a modeling protocol approved by the MPCA, demonstrating compliance with the 1-hour SO₂ NAAQS; and (c) a schedule for implementing the proposed changes and for incorporating limits and other conditions, if necessary, into an enforceable document by June 3, 2018 unless required sooner by federal law.</p>	Total Facility
Testing Frequency Plan	due 60 days after Initial Performance Test for PM ₁₀ and opacity emissions. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on 12-month, 36-month, or 60-month intervals, or as applicable, shall be required upon written approval of the MPCA.	GP008, GP009
Testing Frequency Plan	due 60 days after Initial Performance Test for PM _{2.5} emissions. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on 12-month, 36-month, or 60-month intervals, or as applicable, shall be required upon written approval of the MPCA.	EU006

TABLE B: RECURRENT SUBMITTALS**B-3** 11/20/12

Facility Name: Virginia Department of Public Utilities

Permit Number: 13700028 - 010

What to send	When to send	Portion of Facility Affected
COMS Calibration Error Audit Results Summary	due 30 days after end of each calendar quarter starting 01/18/2012 in which a Calibration Error Audit was conducted.	MR006, MR008, MR012
Cylinder Gas Audit (CGA) Results Summary	due 30 days after end of each calendar quarter starting 01/18/2012 in which a CGA was conducted.	MR005, MR010, MR011, MR013, MR014, MR015, MR016, MR017, MR018
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter starting 01/18/2012 . Submit Deviations Reporting Form DRF-1 as amended. The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions. The EER must be submitted even if there were no excess emissions, downtime, or bypasses during the quarter.	Total Facility
Report	due 30 days after half-year starting 01/18/2012 . The Compliance Schedule Progress Report shall contain the information specified in Minn. R. 7007.0800, subp. 6(B) and shall be submitted on a form approved by the Commissioner in accordance with the Compliance Schedule contained in Table C. Progress Reports will not be needed upon completion of all activities contained in the Compliance Schedule.	Total Facility
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 01/18/2012 . The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 31 days after end of each calendar year starting 01/18/2012 (for the previous calendar year). The Permittee shall submit this on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility
Relative Accuracy Test Audit (RATA) Results Summary	due before end of each calendar year starting 01/18/2012 if a RATA was conducted. The Results Summary is due 30 days after the end of the calendar quarter in which the RATA was completed.	MR005, MR010, MR011, MR013, MR014, MR015, MR016, MR017, MR018

APPENDIX B: Insignificant Activities
Facility Name: Virginia Department of Public Utilities
Permit Number: 13700028-010

Insignificant Activities

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Likely Applicable Requirement
2(D)(3)	<p>Equipment venting particulate matter (PM) or particulate matter less than ten microns (PM₁₀) inside a building (for example: buffing, polishing, carving, cutting, drilling, machining, routing, sanding, sawing, surface grinding, or turning equipment) provided that emissions from the equipment are:</p> <p>(a) vented inside of the building 100 percent of the time; and</p> <p>(b) does not use air filtering systems used to control indoor air emissions</p> <ul style="list-style-type: none"> • Coal crushing (formerly identified as FS002) • Coal conveying (formerly identified as FS003) 	Minn. R. 7011.0710/0715
3(H)	Miscellaneous:	
	<p>3. brazing, soldering or welding equipment;</p> <ul style="list-style-type: none"> • Welding 	Minn. R. 7011.0510/0515; Minn. R. 7011.0610; Minn. R. 7011.0710/0715
3(I)	<p>Individual emissions units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than:</p> <ol style="list-style-type: none"> 1. 4,000 lbs/year of carbon monoxide; and 2. 2,000 lbs/year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten microns, volatile organic compounds (including hazardous air pollutant-containing VOC), and ozone. and 3. 1,000 tons per year of CO₂e. <ul style="list-style-type: none"> • Acid bath for drum cleaning, PTE = 0.19 tpy PM (from initial Title V application) • Coal receiving (formerly identified as FS001), uncontrolled PTE = 0.021 tpy PM • Coal fly ash silo (formerly identified as EU013), uncontrolled PTE = 0.055 tpy PM • Bottom ash silo water wash (formerly identified as EU014), uncontrolled PTE = 0.055 tpy PM • Bottom ash silo bin vent (formerly identified as EU015), uncontrolled PTE = 0.0078 tpy PM • Coal bottom ash loadout (formerly identified as FS008), uncontrolled PTE = 0.0021 tpy PM 	<p>Minn. R. 7011.0710/0715</p> <p>Minn. R. 7011.1110; Minn. R. 7011.0150</p> <p>Minn. R. 7011.0710/0715</p>

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Likely Applicable Requirement
4	<p>Individual emissions units at a stationary source, each of which has:</p> <p>A. Potential emissions of 5.7 pounds per hour or actual emissions of two tons per year of carbon monoxide;</p> <p>B. Potential emissions of 2.28 pounds per hour or actual emissions of one ton per year for particulate matter, particulate matter less than ten microns, nitrogen oxide, sulfur dioxide, and VOCs;</p> <p>C. For hazardous air pollutants, emissions units with:</p> <p>(1) potential emissions of 25 percent or less of the hazardous air pollutant thresholds listed in subp. 5; or</p> <p>(2) combined HAP actual emissions of one ton per year unless the emissions unit emits one or more of the HAPs listed in this subpart; and</p> <p>D. Potential emission up to 10,000 tpy or actual emissions up to 1000 tpy CO₂e.</p> <ul style="list-style-type: none"> Boiler 9 bunker (formerly identified as EU016), actual emissions based on highest throughput 2002 – 2009 = 0.76 tpy PM 	Minn. R. 7011.1110; Minn. R. 7011.0150

Conditionally Insignificant Activities

	Rule Description of the Activity	Likely Applicable Requirement
Minn. R. 7008.4100	<p>Total VOC Usage at the stationary source less than 200 gallons or 2000 pounds in each calendar year. See Minn. R. 7008.4100 for recordkeeping and calculation requirements for this activity.</p> <ul style="list-style-type: none"> VOC Parts washers (VOC usage 172 gallons/year, per initial Title V application) 	Minn. R. 7011.0710/0715
Minn. R. 7008.4110	<p>Emissions from equipment venting particulate matter (PM) or particulate matter less than 10 microns (PM₁₀) inside a building, provided that emissions from the equipment are:</p> <p>a). filtered through an air cleaning system; and</p> <p>b). vented inside of the building 100% of the time.</p> <ul style="list-style-type: none"> Surface grinder Table Saw 	Minn. R. 7011.0710/0715

APPENDIX C: Modeled Stack Parameters
Facility Name: Virginia Department of Public Utilities
Permit Number: 13700028-010

Stack Parameters Used in Modeling

SV	Height (ft.)	Diameter (ft.)	Flow Rate (acfm)	Temperature (F)
SV002 Boiler 7	150	7	97,863	335
SV003 Boiler 9	150	5	106,860	390
SV004 Boiler 10	150	6	88,062	314
SV005 Wood Boiler	150	6.5	99,066	315
SV006 Wood Receiving	40	2.5	35,000	68
SV009 Wood Conveying	40	0.708	3500	68
SV010 Wood Metering	85	0.5	1800	68
SV014 Coal Ash Silo	92	0.67	1795	68
SV015 Coal Bottom Ash Silo Water Wash	85.7	1	2363	170
SV016 Coal Bottom Ash Bin Vent	59.1	2	20	68
SV017 Boiler 9 Bunker	96.9	1	1000	68

Note: The parameters shown in this table reflect the parameters used to demonstrate modeled compliance with ambient air quality standards in effect at the time of modeling for Air Emission Permit 13700028-005. Flow rates and temperatures listed represent the minimum parameters at the maximum emission rate. Flow rate and temperature will fluctuate with boiler load; as boiler load decreases, flow rate, temperature, and emission rates will also decrease.