

**COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Northern Regional Office**

STATEMENT OF LEGAL AND FACTUAL BASIS

Birchwood Power Facility
10900 Birchwood Drive, King George, Virginia 22485
Registration Number: 40809
Permit No. NRO40809

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Birchwood Power Facility has applied for a Title V Operating Permit for its King George facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

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FACILITY INFORMATION

Permittee

Birchwood Power Partners, L.P.
10900 Birchwood Drive
King George, Virginia 22485

Facility

Birchwood Power Facility
10900 Birchwood Drive
King George, Virginia 22485

Plant ID No. 51-099-0012

SOURCE DESCRIPTION

Facility Description: SIC Code 4931 (Electric Power Generation)

The Birchwood Power Facility consists of a pulverized bituminous coal-fired boiler which has a maximum heat input capacity of 2,300 million Btu per hour (MMBtu/hr). The boiler's approved fuel is bituminous coal; Number 2 fuel oil may be used during start-ups, shutdowns and periods of flame instability. The steam generated by the boiler is directed through a steam turbine which drives an electric generator capable of producing about 240 megawatts (MW) net of electric power.

To abate the release of pollutants to the atmosphere, a number of air pollution control devices have been installed. A selective catalytic reduction system with ammonia injection is employed to reduce emissions of nitrogen oxide (NO_x). A combination of low sulfur coal and a flue gas desulfurization system, consisting of a dry lime scrubber, controls emissions of sulfur dioxide (SO₂). A high efficiency fabric filter baghouse minimizes the amount of both filterable and inhalable particulate matter emissions to the atmosphere.

To support the operation of the boiler and its air pollution control devices, the facility is equipped with various auxiliary systems, including a coal handling system (delivery, stockpiling, crushing, conveying, and storing), an ammonia handling system (storage and delivery), a lime handling system (delivery, storage, and conveying), a flyash handling system (conveying and storage for reuse or off-site disposal), a 200,000 gallon No. 2 fuel oil above ground storage tank, one emergency generator, and one emergency fire water pump.

The facility is a Title V major source of nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), particulate matter (PM and PM₁₀) and greenhouse gases. The facility is an 'area source' for hazardous air pollutants (HAPs).

This source is located in King George County, Virginia, an attainment area for all pollutants, and

is a PSD major source. The facility is currently permitted under a PSD Permit issued on August 23, 1993, and most recently amended on April 23, 2014. The facility is subject to federal New Source Performance Standards (NSPS), Subparts Da and Y and federal National Emission Standards for Hazardous Air Pollutants (NESHAP), Subparts ZZZZ and UUUUU. The Clean Air Interstate Rule (CAIR) program also applies to this facility.

The Acid Rain Permit Program is not applicable to the facility. The facility is an independent power provider with a power purchase agreement entered prior to November 15, 1990, and is therefore exempt from the Title IV permitting regulations.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, was last conducted on June 26, 2013. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any other state or federal applicable requirements at this time.

CHANGES SINCE INITIAL PERMIT

The following are changes to the existing Title V permit since issuance on December 3, 2003. Please note that the condition numbers are from the draft Title V permit.

- *Compliance Assurance Monitoring (CAM) Plan:* As part of the permit renewal the boiler (Ref. 1) and flyash silo (Ref. 8) are subject to the requirements of 40 CFR Part 64, Compliance Assurance Monitoring (CAM). As part of the renewal application the facility submitted CAM plans for the fabric filter baghouse on the boiler, and the fabric filter baghouse on the flyash silo.
- *40 CFR 60 Subpart Da:* The Standards of Performance for Electric Utility Steam Generating Units has been updated since the initial Title V; changes to the NSPS are incorporated into the Title V permit conditions.
- *40 CFR 63 Subpart UUUUU:* The boiler (Ref. 1) is subject to the *National Emission Standards for Hazardous Air Pollutants: Coal- and Oil- Fired Electric Utility Steam Generating Units*. General requirements to comply with MACT Subpart UUUUU are incorporated in the Title V permit.
- *40 CFR 60 Subpart Y:* The Standards of Performance for Coal Preparation and Processing Plants is applicable to the coal handling and processing equipment at the facility. The NSPS Subpart Y requirements are incorporated into the Title V permit.
- *40 CFR 63 Subpart ZZZZ:* The two emergency stationary RICE (Ref. 13 and 14) are subject to the *National Emission Standards for Hazardous Air Pollutants for Stationary*

Reciprocating Internal Combustion Engines. The MACT Subpart ZZZZ requirements have been included in the Title V permit.

- *Clean Air Interstate Rule (CAIR) Requirements:* CAIR requirements are included as Condition 162 and as an attachment to the permit.

These changes are discussed in more detail in the sections below.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID ^a	Emission Unit Description ^b	Size/Rated Capacity ^c	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date ^d
Fuel Burning Equipment							
1	1	ABB-CE Systems pulverized coal, wet bottom, tangentially fired boiler (approved fuel is bituminous coal. No. 2 fuel oil is used during start-ups, shutdowns and periods of flame instability)	2,300 MMBtu/hr	ABB-ES lime spray dryer	D1	SO ₂	8/23/93 (I) 2/16/94 (A) 3/17/94 (E)
				ABB-CE Systems/Siemens-KWU selective catalytic reduction (SCR) system	D2	NO _x	11/27/95 (A) 7/19/96 (A) 7/7/00 (A) 08/10/01 (A)
				ABB-ES fabric filter baghouse	D3	PM-10 Lead	4/22/05 (A) 9/14/07 (A) 4/23/14 (A)
Coal Handling / Processing Equipment							
2	NA	Coal unloading via coal car tipping equipment and conveyors	2,800 tons/hr	Dust suppression (Chemicals or Water)	D4	PM-10	8/23/93 (I) 2/16/94 (A) 3/17/94 (E) 11/27/95 (A) 7/19/96 (A) 7/7/00 (A) 08/10/01 (A) 4/22/05 (A) 9/14/07 (A) 4/23/14 (A)

Emission Unit ID	Stack ID ^a	Emission Unit Description ^b	Size/Rated Capacity ^c	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date ^d
3	NA	Coal pile drop via conveyors	2,800 tons/hr	Dust suppression	D4	PM-10	Same as above
4	NA	Coal storage piles	34,000 tons	Dust suppression	D4	PM-10	Same as above
5	NA	Coal reclaiming via hoppers and covered conveyors	700 tons/hr	Proper operation and maintenance	D5	PM-10	Same as above
6	NA	Coal crushing via crusher and covered conveyors	700 tons/hr	Proper operation and maintenance	D6	PM-10	Same as above
7	NA	Coal bunkers for inside coal storage	4,300 tons	Two fabric filter dust collectors (vent to the building)	D7	PM-10	Same as above
8	3	Flyash disposal system via covered conveyors and storage silo	19.2 tons/hr	Fabric filter dust collector (vents to the atmosphere)	D8	PM-10	Same as above
9	NA	Lime handling system - lime silo fill & storage	2.4 tons/hr	Proper operation and maintenance	D9	PM-10	Same as above
Reciprocating Internal Combustion Engines							
13	4	Emergency Fire Pump Engine (Diesel Fuel)	305 HP	--	--	--	--
14	5	Emergency Generator (Diesel Fuel)	685 HP	--	--	--	4/22/05 (A) 9/14/07 (A) 4/23/14 (A)

Table Notes:

- ^a For "Stack ID" listed as NA or not applicable, any emissions are considered fugitive
- ^b Construction date for equipment sometime in and after 1994
- ^c The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.
- ^d For permit date information, I = issued (original) date, A = Amendment date, E = effective date (as a result of final EPA Environmental Appeals Board Decision)

EMISSIONS INVENTORY

Annual emissions summarized in the following table are derived in part from the 2013 CEDS emission report. A copy of the report is included as Attachment A.

2013 Pollutant Emissions (Plantwide Total)	
Pollutant	Tons Emitted
Criteria Pollutants	
Particulate Matter (PM)	55.8
PM-10	55.2
PM-2.5	48.9
Nitrogen Oxides (NO _x)	300.0
Sulfur Dioxide (SO ₂)	286.0
Carbon Monoxide (CO)	632.9
Volatile Organic Compounds (VOC)	31.6
Lead (Pb)	0.005
Hazardous Air Pollutants (HAPs)	
Arsenic Compounds (ASC)	0.05
Beryllium Compounds (BEC)	0.00
Chloride Compounds (as HCl gas)	3.11
Chromium Compounds (CRC)	0.04
Fluoride Compounds (as HF)	0.21
Manganese Compounds (MNC)	0.06
Mercury Compounds (HGC)	0.01
Nickel Compounds (NIC)	0.04
Polycyclic Organic Matter (POM)	0.01

EMISSION UNIT APPLICABLE REQUIREMENTS

Fuel Burning Equipment Unit: Ref. No. 1

Limitations

The following limitations are state BACT requirements from the Prevention of Significant Deterioration (PSD) permit. The PSD permit was issued on 8/23/1993, and was amended on 2/16/1994. An EPA Environmental Appeals Board Decision made the permit effective on 3/17/1994. The permit was amended on 11/27/1995, 7/19/1996, 7/7/2000, 08/10/2001, 4/22/2005, 9/14/2007, and 4/23/2014. For the purposes of this Permit and Statement of Basis, the PSD permit will be referred to as the 4/23/2014 permit. The following limitations are specific for boiler 1. The condition numbers below are from the PSD permit; a copy of the permit is enclosed in Attachment B.

- Condition 3: Particulate matter emissions from the boiler shall be controlled by a fabric filter baghouse. The condition also establishes requirements/situations for bypassing the baghouse.
- Condition 4: Sulfur dioxide (SO₂) emissions from the boiler shall be controlled by a dry flue gas desulfurization (FGD) system consisting of a lime spray dryer system. The condition also establishes a control efficiency for the lime spray dryer system.
- Condition 5: Nitrogen oxide (NO_x) emissions from the boiler shall be controlled by combustion technology and selective catalytic reduction (SCR) with ammonia injection. The condition also establishes a NO_x emission rate.
- Condition 6: The condition provides design parameters for the SCR to ensure compliance with the NO_x emission rate established in Condition 5.
- Condition 7: Carbon monoxide (CO) and volatile organic compound (VOC) emissions from the boiler shall be controlled by combustion technology.
- Condition 11: The condition establishes the coal throughput for the boiler.
- Condition 13: The condition establishes the short-term (lb/MMBtu), hourly (lb/hr), and annual (ton/yr) emission limits for the boiler. Additional language from the NSPS Subpart Da was added for calculation of PM emissions.
- Condition 15: The condition establishes the opacity limitation for the boiler.

- Condition 17: The condition establishes the approved fuels for the boiler. The boiler may operate on low sulfur bituminous coal. The condition also establishes that Number 2 distillate fuel oil may be used during start-up, shutdowns, and periods of flame instability.
- Condition 18: The condition establishes the maximum fuel sulfur content for the bituminous coal.
- Condition 19: The condition establishes the maximum fuel sulfur content for the distillate oil.
- Condition 27: Except where the Title V permit is more restrictive, the boiler shall be operated in compliance with the requirements of 40 CFR 60, Subpart Da.
- Condition 29: The condition establishes that the facility shall be modified upon request by the DEQ to allow emissions testing using appropriate methods upon reasonable notice at any time.
- Condition 45: The condition allows the facility to use spent chemical metal cleaning water (generated on-site) as makeup water for the lime spray dryer system.

As indicated in Condition 27 of the PSD permit, the boiler is subject to the requirements of 40 CFR 60 Subpart Da. In addition to the conditions from the PSD permit, the following conditions have been added to the Title V permit for the boiler in accordance with 40 CFR 60 Subpart Da (NSPS Subpart Da); condition number refers to the Title V permit:

- Condition 19: The condition establishes that the PM, NO_x and SO₂ emission standards apply at all times except during periods of start-up, shutdown, or malfunction.

The NSPS Subpart Da also establishes an opacity standard, and emission standards for PM, NO_x, and SO₂; in each case, the PSD permit provides limitations that are equal to, or more stringent than, the applicable standards in the subpart.

- The opacity standard in §60.42Da (b) is 20 percent opacity (six minute average), except for one six-minute period per hour of not more than 27 percent opacity. The PSD permit establishes a limit of 10 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 20 percent opacity.
- The particulate matter standard in §60.42Da (a) is 0.03 lb/MMBtu heat input. The PSD permit establishes individual fuel emission rates for coal (0.020 lb/MMBtu) and distillate oil (0.014 lb/MMBtu). In addition to the individual fuel emission rates the PSD permit

also establishes short-term limits of 0.020 lb/MMBtu.

- The NO_x standard in §60.44Da (a)(1) for the combustion of bituminous coal is 0.60 lb/MMBtu; the NO_x standard in §60.44Da (a)(1) for the combustion of distillate oil is 0.30 lb/MMBtu. The PSD permit establishes maximum individual fuel emission rates for coal and distillate oil of 0.15 lb/MMBtu. In addition to the individual fuel emission rates the PSD permit also establishes a maximum short-term limit of 0.15 lb/MMBtu.
- The sulfur dioxide standard in §60.43Da (a)(4) for the combustion of solid fuel is 0.15 lb/MMBtu; the PSD permit establishes an individual fuel emission rate of 0.10 lb/MMBtu for coal. The sulfur dioxide standard in §60.43Da (b)(1) for the combustion of liquid fuel is 0.80 lb/MMBtu; however the compliance provisions of §60.48Da (a) exclude periods of start-up, shutdown, and malfunction from the sulfur dioxide standard in §60.43Da. The facility is only allowed to burn distillate oil during periods of start-up, shutdown, or periods of flame instability (malfunction). The PSD permit establishes a maximum individual fuel emission rate of 0.30 lb/MMBtu for distillate oil. The short-term emission limits for sulfur dioxide established in the PSD permit are 0.10 lb/MMBtu.

The emission standards from the NSPS Subpart Da have been streamlined into the Title V permit with the PSD permit conditions.

The boiler is also subject to the National Emission Standards for Hazardous Air Pollutants: Coal and Oil-Fired Electric Utility Steam Generating Units, 40 CFR 63 Subpart UUUUU. The following requirements are established for the coal-fired boiler, in accordance with 40 CFR 63 Subpart UUUUU (condition numbers refer to the Title V permit):

- Condition 14: Except where this permit is more restrictive, the boiler shall be operated in compliance with the requirements of 40 CFR 63, Subpart UUUUU, no later than April 16, 2015.
- Condition 15: The condition establishes that the permittee must comply with the applicable emission limits in Table 2 of 40 CFR 63 Subpart UUUUU, each applicable work practice standard in Table 3 of 40 CFR 63 Subpart UUUUU, and each applicable operating limit in Table 4 of 40 CFR 63 Subpart UUUUU, that applies to the boiler no later than April 16, 2015.
- Condition 16: The condition establishes that the permittee must meet the general compliance requirements in §63.10000, no later than April 16, 2015.
- Condition 17: The condition outlines the affirmative defense requirements from §63.10001.

Due to the multitude of options for selecting emission limitations, work practice standards, and operating limits provided in 40 CFR 63.9991 and Tables 1, 2, 3 and 4 of the subpart, the MACT Subpart UUUUU requirements are not expanded upon in this Title V renewal. Due to the future compliance date (April 16, 2015), the facility has not selected the emission limitations, or compliance strategy to demonstrate compliance with the limitations, at this time. The facility is still required to meet the requirements of the subpart no later than April 16, 2015, which is established in the Conditions specified above.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-50-80, Standard for Visible Emissions – Visible emission limit for new and modified units shall not exceed 20% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30% opacity is applicable to the boiler. However, the PSD permit, dated 4/23/2014, provides more stringent requirements.

Monitoring and Recordkeeping

The following monitoring and recordkeeping conditions have been incorporated from the PSD permit, dated 04/23/2014:

- | | |
|---------------|--|
| Condition 3: | The condition requires the facility to install a device to continuously measure the pressure drop across the fabric filters of the baghouse. |
| Condition 5: | The condition requires the facility to install and maintain a device to measure and record the amount of ammonia injected into the boiler exhaust gas stream. |
| Condition 18: | The condition requires the facility to maintain records of all coal shipments received. The records must include the sulfur and ash content of each shipment. |
| Condition 19: | The condition outlines the various ways to demonstrate compliance with the sulfur content limitation for distillate oil. The facility can maintain records of fuel shipments or sample the fuel to determine the sulfur content. |
| Condition 20: | A device shall be installed and operated to measure and record the volumetric flow rate of the stack exhaust gas. It shall be maintained and calibrated in accordance with the manufacturer's specification. |
| Condition 21: | The permittee shall install, calibrate, maintain, and operate a |

continuous monitoring system, and record the output of the system, for measuring the opacity of emissions discharged from the boiler to the atmosphere.

- Condition 22: The condition outlines the requirements for the installation of a NO_x Continuous Emission Monitoring System (CEMS). The condition also requires the installation of a suitable diluents monitor (either CO₂ or O₂).
- Condition 23: The condition outlines the requirements for the installation of a SO₂ Continuous Emission Monitoring System (CEMS).
- Condition 24: The condition outlines additional monitoring requirements for the boiler, in addition to additional monitoring requirements for the NO_x and SO₂ CEMS including parameters to demonstrate compliance with the emission limitations.
- Condition 25: The condition establishes that the continuous monitoring data generated by the opacity monitoring system may, at the discretion of the board, be used as evidence of violation of the applicable emission standards.
- Condition 26: The condition establishes the minimum amount of valid data to be collected by the NO_x and SO₂ CEMS, in addition to the continuous monitoring system for opacity.

Condition 33 of the PSD permit requires the facility to maintain monthly and annual throughput records of the amount of coal and distillate oil combusted.

Condition 24 of the PSD permit requires the instrumentation to calculate and record the hourly heat input of the boiler in MMBtu/hr. The hourly emission limits established for the boiler are based on the rated capacity and the emission factors established through the PSD permitting process.

Annual emissions for the boiler are calculated based on the maximum fuel throughput contained in the PSD permit. Condition 11 of the PSD permit limits the total fuel throughput for the boiler. Monthly recordkeeping demonstrating compliance with the fuel throughput limits provides reasonable assurance of compliance with the annual criteria pollutant emission limits, satisfying the periodic monitoring requirement. In addition to the records of the annual fuel throughput, the facility is also required to keep records of emission calculations sufficient to verify compliance with the annual emission limitations. Stack testing is required to verify emissions of PM-10, CO and VOC on a biennial basis, as discussed in the testing section below. CEMS data provides a means of demonstrating compliance with the NO_x and SO₂ emission limitations.

Condition 5 of the PSD permit requires the facility control NO_x emissions through the use of combustion technology and the use of an SCR with ammonia injection; Condition 5 of the PSD permit also requires the facility to install and maintain a device to measure and record the amount of ammonia injected into the boiler exhaust gas stream.

Condition 20 of the PSD permit requires a device to measure and record the volumetric flow rate of the stack exhaust gas. The requirement to monitor and record the parameters of the exhaust gas provides a means of demonstrating continuous compliance with the requirement to control NO_x emissions through the use of combustion technology. The requirement to monitor and record the ammonia injection rate into the boiler exhaust gas stream provides the basis for establishing the SCR is operating properly. In addition to the requirements to measure parameters of the exhaust and ammonia inject rates, Condition 22 of the PSD permit requires the installation of a NO_x CEMS for the boiler. Condition 24 of the PSD permit outline additional requirements for the use of the CEMS, and Condition 26 of the PSD permit outlines the data collection requirements for the CEMS. The continuous monitoring data generated by the NO_x CEMS is used to determine continuous compliance with the NO_x emission limitations. Use of NO_x CEMS also provides a means of demonstrating continuous compliance with NSPS Subpart Da emission limitations and monitoring requirements. The NSPS Subpart Da monitoring requirements for the NO_x CEMS have been streamlined into the Title V permit with the PSD monitoring requirements.

Condition 3 of the PSD permit requires the facility to install a device to continuously measure the pressure drop across the fabric filters. The requirement to measure and record the pressure drop provides a means of demonstrating that the baghouse is operating properly. Condition 66 of the Title V permit establishes a recordkeeping requirement for the facility to maintain records of stack opacity and baghouse pressure drops, including any corrective actions taken to correct opacity excursions. The recordkeeping of Condition 66 is established as a daily record.

In addition to measuring the pressure drop across the fabric filters, the facility is also required to install a continuous opacity monitoring system (COMS), as provided in Condition 21 of the PSD permit. The COMS provides a continuous indicator of the opacity of the exhaust gas. As mentioned above, the facility is also required to measure the volumetric flow rate of the stack exhaust gas (Condition 20 of the PSD permit). These measurements of the exhaust parameters can be used as an indicator of the system's performance.

By measuring the operational parameters of the air pollution control device, monitoring the opacity and flow of the exhaust, and monitoring and recording the opacity and baghouse pressure drop, the facility can provide reasonable assurance the fabric filter baghouse is operating properly, and can also provide reasonable assurance of compliance with the particulate matter and opacity limitations in the permit. Use of the COMS provides a means of demonstrating continuous compliance with NSPS Subpart Da opacity limitation and associated monitoring requirements. The NSPS Subpart Da monitoring requirements have been streamlined into the Title V permit with the PSD monitoring requirements

In addition to the limitations, monitoring, and recordkeeping established for the fabric filter baghouse discussed above, the boiler is also subject to Compliance Assurance Monitoring (CAM) under 40 CFR Part 64; CAM is discussed in a separate section below.

Emissions of sulfur dioxide from the boiler are controlled through the use of a dry flue gas desulfurization (FGD) system consisting of a lime spray dryer system; the requirements for the lime spray dryer contain control efficiency requirements.

The PSD permit includes limitations on the fuel sulfur content of the coal and distillate oil. Conditions 18 of the PSD permit establishes fuel certification requirements for each shipment of coal received to demonstrate compliance with the fuel and ash content requirements established in the permit. Condition 19 of the PSD permit establishes similar requirements for each shipment of distillate oil received. In lieu of obtaining certification for the shipments of distillate oil, the facility has the option of sampling and analyzing each shipment of fuel oil to determine the sulfur content. The fuel certification requirements for the coal and fuel oil provide a means of demonstrating compliance with the fuel sulfur content limitations established in the permit. In addition to establishing compliance with the fuel sulfur content limitations, the certification also help demonstrate continued compliance with the fuel throughput limitations, since each certification must include the amount of fuel delivered.

Condition 23 of the PSD permit requires the installation of a SO₂ CEMS to continuously monitor only SO₂ emissions. Measurements of SO₂ emissions are taken before and after the control device to calculate a percent reduction.

The continuous monitoring data generated by the SO₂ CEMS is used to determine continuous compliance with the thirty day rolling average SO₂ emission standard (in lbs/MMBtu and lbs/hour) and the SO₂ thirty day rolling average removal efficiencies specified in the permit.

Condition 24 of the PSD permit outlines additional requirements for the use of the CEMS, and Condition 26 of the PSD permit outlines the data collection requirements for the CEMS.

Use of the SO₂ CEMS provides a means of demonstrating continuous compliance with NSPS Subpart Da emission limitations and monitoring requirements. The NSPS Subpart Da monitoring requirements for SO₂ CEMS have been streamlined into the Title V permit with the PSD monitoring requirements.

Conditions 22 and 23 of the PSD permit outline the recordkeeping requirements to show compliance with the NO_x and SO₂ emission limits, as well as the requirements for the CEMS. The requirements of Conditions 22 and 23 of the PSD permit have been streamlined with the applicable monitoring and recordkeeping requirements of NSPS Subpart Da.

Conditions 32, 33, 35, and 36 of the Title V permit provide additional monitoring requirements for the CEMS and COMS. These requirements are established in accordance with the NSPS Subpart Da and the general NSPS requirements in Subpart A, and have been streamlined in the

permit.

Condition 37 of the Title V permit establishes the span for the SO₂ CEMS, in accordance with a DEQ letter dated July 31, 1996, an EPA letter dated July 24, 1996, and EPA e-mail letter dated March 14, 2007; the condition was stream-lined with the requirements of §60.49Da. A copy of the letters and e-mail are included as Attachment G.

In addition to the monitoring requirements listed above, the following monitoring and recordkeeping requirements have been established in the Title V permit to demonstrate compliance with 40 CFR 63 Subpart UUUUU:

- Condition 41: The condition establishes the facility must conduct the subsequent performance tests and tune-ups in accordance with §63.10006.
- Condition 42: The permittee shall meet the monitoring, installation, operation, and maintenance requirements in accordance with §63.10010.
- Condition 43: The permittee must demonstrate initial compliance with the applicable emission limitations of Table 2 from 40 CFR 63 Subpart UUUUU, and each applicable work practice standard of Tables 3 and 4 from 40 CFR 63 Subpart UUUUU in accordance with §63.10011.
- Condition 44: The permittee shall meet the applicable testing and initial compliance requirements of §63.10005, §63.10006, §63.10007, §63.10008, §63.10010, and §63.10011.
- Condition 45: The permittee shall meet the applicable continuous compliance requirements of §63.10020, §63.10021, §63.10022, and §63.10023.
- Condition 69: The permittee must meet the applicable recordkeeping requirements of §63.10032 and §63.10033.

Compliance Assurance Monitoring

A “large” pollutant specific emission unit (PSEU) is defined as a unit that has potential pre-control emissions greater than a major source threshold on a unit-by-unit and pollutant-by-pollutant basis.

The pre-controlled emissions of NO_x, SO₂, and PM/PM-10 from the boiler exceed the major source threshold of 100 tons/yr. The boiler uses control devices to control emissions of NO_x, SO₂, and PM/PM-10. NO_x emissions from the boiler are controlled through the use of a selective catalytic reduction (SCR) with ammonia injection; SO₂ emissions from the boiler are controlled through the use of a dry flue gas desulfurization (FGD) system consisting of a lime spray dryer

system; and PM/PM-10 emissions from the boiler are controlled through the use of a fabric filter baghouse.

The boiler satisfies the five requirements of CAM applicability listed in EPA's Table 1-1 CAM guidance for certain pollutants (e.g. PM/PM-10); the boiler is therefore subject to Compliance Assurance Monitoring (CAM).

Emissions of NO_x from the boiler are exempt from 40 CFR Part 64 (CAM) in accordance with §64.2(b)(1)(vi); the emission unit is equipped with a CEMS for NO_x, which meets the regulatory definition of continuous compliance determination method.

Emissions of SO₂ from the boiler are exempt from 40 CFR Part 64 (CAM) in accordance with §64.2(b)(1)(vi); the emission unit is equipped with a CEMS for SO₂, which meets the regulatory definition of continuous compliance determination method.

There are no CO or VOC control devices installed on the boiler, therefore CAM is not applicable for these pollutants.

CAM is applicable to PM/PM-10 emissions from the boiler. Emissions of PM/PM-10 are controlled through the use of a fabric filter baghouse. The CAM requirements for the boiler and associated fabric filter baghouse are discussed below.

Rationale for Selection of Performance Indicators

The baghouse differential pressure drop has been selected as the first indicator because it is indicative of the baghouse operation. The baghouse is required to be equipped with a device to continuously measure the differential pressure in accordance with the PSD permit. Differential pressure across the baghouse has a direct correlation to the performance of the baghouse, and consequently PM/PM-10 emissions. Differential pressure across the baghouse is appropriate because baghouses are designed to operate at a relatively constant pressure drop. Monitoring pressure drop provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop can indicate that the cleaning cycle is not frequent enough, cleaning equipment is damaged, the bags are becoming inefficient, or the airflow has increased. A decrease in pressure drop may indicate broken or loose bags (but this is also indicated by the presence of visible emissions, indicator No. 2). A pressure drop across the baghouse also serves to indicate that there is airflow through the control device.

The second indicator selected was stack opacity. The opacity of the exhaust gas is measured using a Continuous Opacity Monitoring System (COMS), located on the stack. While opacity is not a direct measurement of PM/PM-10, it can be used as an indicator of the control device performance. An increase in the opacity can be observed in the event of a torn or broken bag, the activation of control device bypass, or a cleaning system failure. Monitoring the opacity provides a means of detecting a change in operation that could lead to an increase in emissions, and provides a reasonable assurance of the compliance with the underlying PM/PM-10 emission

limits.

Rationale for Selection of Indicator Ranges

An excursion for the baghouse differential pressure is defined as any operating condition where the differential pressure is outside the manufacturer's recommended range of 1.0 to 6.4 inches of water. An excursion will trigger an investigation into the cause, corrective action, and reporting requirements. All excursions will be documented and reported. A pressure drop above the indicator range means that bag(s) need replacement or that the bag cleaning function is not working properly. A pressure drop below 1.0 inches of water may indicate bypass or bag rupture. Condition 50 requires investigation and correction of control device operation upon the detection of an excursion or exceedance. The Quality Improvement Plant (QIP) threshold for this indicator is no more than five percent of the operating time outside of the indicator range in any semi-annual reporting period.

An excursion for the opacity is defined as a measured stack opacity greater than 10 percent, based on a three-hour block average, excluding those events defined as startup, shutdown or malfunction. All excursions will be documented and reported. An excursion means that bag(s) need replacement, the bag cleaning function is not working properly, or bag rupture or bypass. Daily zero and calibration drift checks, periodic cleaning of optical surfaces, and quarterly calibrations are required. The QIP threshold for this indicator is exceedances no more than ten percent of the operating time for each calendar quarter.

The eight conditions that are added to the Title V permit (Conditions 46 through 53 of the Title V permit) are new standard conditions that were added to DEQ's Title V boilerplate since the last renewal of this permit. A copy of the CAM plan is available as Attachment B to the permit and as Attachment E in the Statement of Basis.

Testing

The following testing requirements from the PSD permit (dated 04/23/2014) are included in the Title V permit (condition numbers refer to the PSD permit):

- Condition 28: The CEMS reference method testing required in the appropriate EPA Performance Specification listed in 40 CFR 60, Appendix B shall be used to conduct the performance tests for the SO₂, SO₂ removal efficiency and NO_x standards when requested by the DEQ. Upon request by the DEQ, performance evaluations of the opacity monitor shall be conducted in accordance with 9 VAC 5-50-30. The DEQ shall be furnished with two copies of the report of the performance evaluations within sixty days of the evaluation.
- Condition 29: The permitted facility shall be modified upon request by the DEQ to allow emissions testing using appropriate methods upon

reasonable notice at any time. Stack tests for the new or modified sources shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and 9 VAC 5-60-30 and the test methods and procedures contained in each applicable section or subpart listed 9 VAC 5-50-410 and 9 VAC 5-60-70. Opacity tests shall be conducted in accordance with 40 CFR, Part 60, Appendix A, Method 9. The details of emission tests are to be arranged with the DEQ. Condition 29 of the PSD permit was streamlined with the general NSPS requirements of 40 CFR 60.8 (c and e).

In addition to the testing requirements from the PSD permit, the following testing requirements are established in the Title V permit (condition numbers refer to the Title V permit):

Condition 72: As a component of the periodic monitoring plan, once every other year (biennially), the permittee shall conduct stack emission tests for VOC and CO to ensure compliance with the emission limits.

Condition 73: If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with the procedures approved by the DEQ.

The requirement for biennial stacking testing for VOC and CO ensures continued compliance with the permit emission limits. Stack testing protocols are required to be submitted and approved by the DEQ prior to any stack testing.

In addition to the testing requirements listed above, the following testing requirement has been established in the Title V permit to demonstrate compliance with 40 CFR 63 Subpart UUUUU:

Condition 75: The permittee must meet the applicable performance testing requirements of §63.10007 and Table 5 to 40 CFR 63 Subpart UUUUU.

The frequency of the particulate matter stack testing, required by 40 CFR 63 Subpart UUUUU, is used to establish continued compliance with the PM-10 emission limitations in the permit. Stack testing protocols are required to be submitted and approved by the DEQ prior to any stack testing.

Reporting

The following reporting requirements are taken from the PSD permit dated 04/23/2014; condition numbers refer to the PSD permit:

Condition 18: The condition establishes the reporting requirement for the distillate oil fuel certifications

- Condition 19: The condition establishes the reporting requirement for the coal fuel certifications.
- Condition 32: The permittee shall furnish notification to the DEQ of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance.
- Condition 33: The condition establishes the requirements for the quarterly reports that are to be submitted to the DEQ. Specifics for the reporting requirements are included in the condition.

Conditions 18, 19, and 33 of the PSD permit have been streamlined with 40 CFR 60.7 (c & d) and 40 CFR 60.49Da (b through i). The reporting requirement also includes requirements for: NO_x and SO₂ reports based on the collected CEMS data; emissions data reporting as required in Condition 34 of the Title V permit; and opacity reports based on the collected COMS data.

In addition to the reporting requirements above, the following reporting requirement has been included for the boiler to satisfy the reporting requirements of the MACT Subpart UUUUU (Condition numbers refer to the Title V permit):

- Condition 78: The permittee must submit the applicable notifications and reports in accordance with §63.10030 and §63.10031.

EMISSION UNIT APPLICABLE REQUIREMENTS

Coal Processing Equipment

Limitations

The following limitations are state BACT requirements from the 04/23/2014 PSD permit. The following limitations are specific for the Coal Processing Equipment, as described in the Emission Units table. The condition numbers below are from the PSD permit; a copy of the permit is enclosed in Attachment B:

- Condition 8: The condition establishes the particulate matter control requirements for the coal and lime handling equipment.
- Condition 9: The condition establishes the control requirements for the flyash storage silo.
- Condition 14: The condition establishes the fugitive particulate matter emission limitations for the coal, and lime storage and handling systems.

- Condition 16: The condition establishes the opacity limitation for the fabric filters required in Conditions 8 and 9.
- Condition 27: The condition establishes the permittee shall meet all applicable requirements of 40 CFR Part 60, Subpart Y, except where the Title V permit is more restrictive.

In addition to the requirements from the PSD permit, the Coal Processing Equipment is subject to 40 CFR 60 Subpart Y – Standards of Performance for Coal Preparation and Processing Plants. The Coal Processing Equipment was constructed after October 27, 1974, but before April 28, 2008. The affected units at the facility include the coal processing and conveying equipment, coal storage systems, and transfer and loading systems, in accordance with §60.250 (b). The following conditions are established in accordance with NSPS Subpart Y; condition numbers refer to the Title V permit:

- Condition 83: Visible emissions from the coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal (Ref. 2, 3, and 4) shall not exceed 20 percent opacity.

The NSPS Subpart Y establishes an opacity limit of 20 percent for coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal. The opacity requirement from Subpart Y has been streamlined for equipment equipped with fabric filters since the PSD permit provides a more stringent limitation for these pieces of equipment.

Compliance Assurance Monitoring

The coal processing and handling equipment (Ref. 2, 3, 4, 5, 6, and 7) are subject to emission standards (40 CFR 60 Subpart Y) proposed by the Administrator after November 15, 1990, pursuant to section 111 or 112 of the Act, and are therefore exempt from CAM under 40 CFR 64.2 (b)(1)(i).

The fabric filter on the lime handling system (Ref. 9) meets the regulatory definition of Inherent Process Equipment in accordance with 40 CFR 64.1. The filter is used as a material recovery device that is designed to minimize the loss of lime rather than for purposes of air pollution control.

The pre-controlled emissions of PM/PM-10 from the flyash storage silo (Ref. 8) exceed the major source threshold of 100 tons/yr. The flyash storage silo (Ref. 8) uses a control device to control emissions of PM/PM-10; PM/PM-10 emissions from the flyash storage silo (Ref. 8) are controlled through the use of a fabric filter baghouse.

Rationale for Selection of Performance Indicators

Opacity has been selected as the first indicator of performance for the flyash silo (Ref. 8). The silo vent filter discharge is located at the top of the flyash silo along with the pressure relief cap. An increase in the opacity can be observed in the event of a torn or broken bag, the activation of control device bypass, or a cleaning system failure. Opacity is related to the size and concentration of particles in the gas stream. As particulate mass emissions increase, it can be reasonably expected that opacity will also increase. Monitoring the opacity provides a means of detecting a change in operation that could lead to an increase in emissions, and provides a reasonable assurance of the compliance with the underlying PM/PM-10 emission limits.

A periodic structural inspection of the baghouse and bag filters has been selected as the second indicator of performance for the flyash silo (Ref. 8). Inspections will alert the facility of bag deterioration and necessary corrective maintenance to obtain the proper control efficiencies in order to meet emission limitations.

Rationale for Selection of Indicator Ranges

An excursion for the opacity of the flyash silo (Ref. 8) is defined as any visible emissions from the vent filter discharge or pressure relief cap. The opacity of the exhaust gas from the vent filter and pressure relief cap are observed daily. An excursion will trigger an investigation into the cause, corrective action, and reporting requirements. All excursions will be documented and reported. An excursion means that bag(s) need replacement, the bag cleaning function is not working properly, or bag rupture or bypass has occurred. The QIP threshold for this indicator is no more than five exceedances for each calendar quarter.

An excursion for the bag filter inspections is defined as a failure to perform the monthly or annual inspection of the bag filters. Excursions trigger an inspection, corrective action, and a reporting requirement.

The eight conditions that are added to the Title V permit (Conditions 85 through 92) are new standard conditions that were added to DEQ's Title V boilerplate since the last renewal of this permit. A copy of the CAM plan is available as Attachment C to the permit and as Attachment E in the Statement of Basis.

Monitoring and Recordkeeping

There are no applicable continuing compliance requirements established for the Coal Processing Equipment in 40 CFR 60 Subpart Y. The following are monitoring and recordkeeping requirements established to determine compliance with the emission limitations established in the PSD permit and the NSPS Subpart Y requirements; condition numbers refer to the Title V permit:

Condition 93: The condition requires the facility to visually observe all conveyors, transfer points and crushers during operation (or shut

down for the coal piles), for at least a brief time period, at least once each calendar week to determine which operating emissions units have any visible emissions.

Condition 94: The condition requires the facility to maintain records of visible emission observations as well as inspection records as required by the fabric filter Compliance Assurance Monitoring (CAM) Plan.

The emission limitations from the coal handling equipment are the summation of emissions from all parts of the coal processing equipment. Emissions are based on the contribution from each coal processing source. The facility detailed the contributions in Appendix B of the PSD Application for the August 23, 1993 permit action. Variables in the calculations of emissions include: emission factors, control efficiencies, hours of operation, material throughputs, wind speeds, and air flow rates through the various fabric filters. A summary of the emission contributions can be found in Attachment C. The facility is able to demonstrate reasonable assurance of compliance with the emission limitations through the use of visible emission observations as required in Condition 93 of the Title V permit, and the associated recordkeeping in Condition 94 of the Title V permit. The presence of visible emissions requires an evaluation of the source to determine the problem and correction of the visible emission condition shall be made. Condition 94 also provides the recordkeeping requirements necessary to demonstrate compliance with the monitoring found in the fabric filter Compliance Assurance Monitoring (CAM) Plan for the flyash silo.

Testing

Condition 95 of the Title V permit establishes that if testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with the procedures approved by the DEQ.

Condition 96 of the Title V permit requires the facility to be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods.

EMISSION UNIT APPLICABLE REQUIREMENTS

Reciprocating Internal Combustion Engines

The facility operates two diesel emergency stationary reciprocating internal combustion engines (RICE) (Ref. 13 and 14). Each emergency stationary RICE is powered by a compression ignition (CI) RICE; the RICE were constructed prior to 2006, and each has a displacement of less than 10 liters per cylinder. One emergency stationary RICE (Ref. 13) is a fire water pump and is not capable of generating electricity; the second is an emergency generator (Ref. 14), which provides electricity to components of the facility in the event of an emergency. The fire water pump (Ref. 13) cannot be enrolled in a load response program due to the nature of its use; the emergency generator is not currently enrolled in any load response programs.

Due to the construction date of the units (Ref. 13 and 14), the New Source Performance Standards, 40 CFR 60 Subpart IIII are not applicable; Subpart IIII standards apply to unit constructed after June 2006. The emergency stationary RICE (Ref. 13 and 14) are subject to the MACT requirements of 40 CFR 63 Subpart ZZZZ.

Limitations

The following limitation is from the 04/23/2014 PSD permit, specific to the emergency electrical power generator (Ref. No. 14). The condition number below is from the PSD permit; a copy of the permit is enclosed in Attachment B:

Condition 12: The condition establishes the emergency generator (Ref. 14) shall not operate more than 500 hours per year.

In addition to the requirement from the PSD permit, the following conditions are established in accordance with the MACT, 40 CFR 63 Subpart ZZZZ, and are applicable to the emergency stationary RICE (Ref. 13 and 14); condition numbers refer to the Title V permit:

Condition 98: This condition establishes that the emergency stationary RICE must be operated in accordance with MACT, Subpart ZZZZ, except where the Title V permit is more restrictive.

Condition 99: This condition establishes the hourly operational conditions for each emergency stationary RICE.

Condition 100: This condition states that each CI engine shall meet the applicable work practice standards specified in 40 CFR 63, Subpart ZZZZ (NESHAP for Stationary RICE).

Condition 101: This condition establishes that during periods of startup the permittee must minimize the time spent at idle for the emergency engines and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply, in accordance with Table 2c of the MACT, Subpart ZZZZ.

Condition 102: The condition establishes the requirements for use of an oil analysis program in order to extend the specified oil change requirements in Condition 100.

Condition 103: The requirement establishes the diesel fuel requirements for the emergency stationary RICE.

The MACT establishes maintenance requirements for the stationary RICE (Ref. 13 and 14) as

specified above. Additionally, the MACT establishes the operational conditions that define emergency operation. Condition 101 of the Title V permit establishes a limitation on the amount of time the emergency engines (Ref. 13 and 14) can spend at idle. Condition 102 allows the use of an oil analysis program to meet the work practice standards of Condition 100. After January 1, 2015, Condition 103 establishes limitations on the diesel fuel to be used in the emergency generator (Ref. 14) if it is contractually obligated to operate as part of an Emergency Load Response Program, in accordance with Condition 99 c. Currently only the emergency generator (Ref. 14) is capable of participating in an Emergency Load Response Program.

Monitoring and Recordkeeping

The following monitoring and recordkeeping condition was established to determine compliance with the PSD permit limitations; the permit condition refers to the PSD permit:

Condition 33: For the emergency stationary RICE (Ref. 14) the facility is required to keep a monthly summary table for showing the hours of operation and the reason for operation, as well as the annual hours of operation, calculated monthly as the sum of each consecutive 12-month period.

The recordkeeping condition in the PSD permit provide a means of demonstrating continued compliance with the hours limitation established in Condition 12 of the PSD permit. The PSD recordkeeping permit condition was streamlined with monitoring and recordkeeping requirements from the MACT, discussed below.

The following monitoring and recordkeeping conditions were established in the Title V permit to determine compliance with the MACT limitations:

Condition 104: This condition establishes that the permittee must install non-resettable hour meters on each emergency stationary RICE (if one is not already installed) in accordance with 40 CFR 63.6625(f). The hour meters shall be provided with adequate access for inspection.

Condition 105: This condition establishes that the permittee shall operate and maintain the emergency stationary RICE according to the manufacturer's emission-related written instructions or develop its own maintenance plan.

Condition 106: The condition outlines the two ways to demonstrate compliance with the work practice standards in Condition 102.

Condition 107: The condition requires certification from the fuel supplier with each shipment of diesel fuel for the emergency stationary RICE.

Condition 108: This condition establishes the recordkeeping requirements for the stationary RICE. The permittee must keep records of all maintenance conducted on the emergency stationary RICE as well as hours of operation that are recorded on the hour meter, and all fuel certifications. The condition was streamlined with a similar condition from the PSD permit.

The requirement for installation of non-resettable hour meters, provided in Condition 104, combined with the recordkeeping provided in Condition 108, establishes the means of determining compliance with the hour limitations specified in Condition 12 of the PSD permit and Conditions 99 and 100 of the Title V permit. The required maintenance and operating plans assure compliance with MACT requirements to maintain and operate the engine in accordance with the manufacturer's written instructions. The maintenance plans also provide a means of ensuring the engines meet the maintenance and work practice standards required in Condition 100.

The fuel certification requirements in Condition 107 establish a means of demonstrating compliance with the diesel fuel requirements in Condition 103.

The recordkeeping requirements in Condition 108 establish the recordkeeping requirements necessary to demonstrate compliance with the limitations in the permit. The facility is required to maintain records of the hours of operation for each of the emergency stationary RICE (Ref. 13 and 14), to ensure that each continues to meet the definition of emergency-use, as found in the Virginia Regulations and the MACT. The facility is also required to keep records of maintenance conducted on each emergency stationary RICE (Ref. 13 and 14) in order to demonstrate that each engine is operated and maintained according its own maintenance plan. Records of the fuel certifications (required in Condition 107) establish a means of demonstrating continuous compliance with the fuel requirements in Condition 103.

Compliance Assurance Monitoring (CAM)

CAM does not apply to the emergency stationary RICE because the emergency stationary RICE do not use a control device to achieve compliance with the emission limitations.

Testing

Condition 109 establishes that if testing is conducted in addition to the general monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ.

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

Condition 110 establishes that if the emergency engines are operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule (required in Condition 100), or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

FACILITY WIDE CONDITIONS

Limitations

The following limitations are facility-wide requirements from the 04/23/2014 PSD permit. The condition numbers below are from the PSD permit; a copy of the permit is enclosed in Attachment B:

- Condition 10: The condition establishes that fugitive dust emissions from frequently traveled facility access roads shall be controlled by paving. Fugitive dust emissions from all paved facility roads shall be controlled through frequent sweeping or roadway washing. Fugitive dust emissions from unpaved roads shall be controlled by wet suppression or approved alternatives as necessary.
- Condition 30: The condition requires a physical barrier be installed and maintained at the facility property line to prevent public access.

Monitoring and Recordkeeping

The following monitoring and recordkeeping requirements are established to demonstrate compliance with the emission limitations:

- Condition 113: The facility must keep monthly wet suppression logs for the unpaved roads.

The requirement to keep monthly wet suppression logs for the unpaved roads provides a means of demonstrating compliance with the limitation on the fugitive dust emissions from unpaved roads. These records are to be available on-site for inspection by the DEQ and must be current for the most recent five years.

STATE ONLY APPLICABLE REQUIREMENTS

The following limitations are state BACT requirements from the 04/23/2014 PSD permit. The condition numbers below are from the PSD permit; a copy of the permit is enclosed in Attachment B:

Condition 48: The condition establishes the hourly and annual HAP emission limitations from the boiler.

The hourly emission limits set for the toxic pollutants are based on the higher emissions resulting from two different scenarios, namely, boiler start-up (coal and oil firing with no controls) and boiler operating at 100% load with full air pollution control equipment in operation at design specifications. Annual limits are based on boiler operating at 100% load with full air pollution control equipment in operation at design specifications. Compliance with the hourly and annual toxic pollutant emission limits will be based on meeting the coal throughput limit in Condition 11 of the PSD permit and required use of emissions control equipment specified in Conditions 3 and 7 of the PSD permit. These limitations, with the associated monitoring, recordkeeping, testing and reporting are already provided in the Fuel Burning Requirements as discussed above.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets.

CLEAN AIR INTERSTATE RULE (CAIR) PERMIT

Birchwood submitted a Clean Air Interstate Rule (CAIR) Permit renewal application dated September 4, 2007. CAIR requirements are included in the renewal permit by reference. Upon renewal, the CAIR permit will have the same expiration date as the Title V permit. A copy of the CAIR Permit application is provided as Attachment A to the Permit, and Attachment D to the Statement of Basis.

FUTURE APPLICABLE REQUIREMENTS

None were identified by the applicant.

INAPPLICABLE REQUIREMENTS

The provisions of 40 CFR Part 98 – Mandatory Greenhouse Gas Reporting require owners and operators of general stationary fuel combustion sources that emit 25,000 metric tons CO_{2e} or

more per year in combined emissions from such units, to report greenhouse gas (GHG) emissions, annually. The definition of “applicable requirement” in 40 CFR 70.2 and 71.2 does not include requirements such as those included in Part 98, promulgated under Clean Air Act (CAA) section 114(a)(1) and 208. Therefore, the requirements of 40 CFR Part 98 are not applicable under the Title V permitting program.

As a result of several EPA actions regarding GHG under the CAA, emissions of GHG must be addressed for a Title V permit renewed after January 1, 2011. The current PSD permit for the Birchwood Power Facility contains no GHG-specific applicable requirements and there have been no modifications at the facility requiring a PSD permit. Therefore, there are no applicable requirements for the facility specific to GHG.

Currently inapplicable requirements identified by the applicant were numerous, and are included in Attachment F.

In addition to the inapplicable requirements identified by the applicant, the following requirements have been identified as inapplicable:

40 CFR 60 Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines is not an applicable requirement for the emergency stationary RICE (Ref. 13 and 14) at the facility. The emergency stationary RICE were constructed and manufactured before the applicability date of Subpart IIII, and are therefore not subject to NSPS Subpart IIII.

40 CFR 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Major Sources has been identified as being not applicable to the boiler (Ref. 1). The boiler (Ref. 1) is subject to 40 CFR 63 Subpart UUUUU; therefore the Boiler MACT for Major Sources is not applicable.

40 CFR 63, Subpart JJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources has been identified as being not applicable to the boiler (Ref. 1). The boiler (Ref. 1) is subject to 40 CFR 63 Subpart UUUUU; therefore the Boiler MACT for Area Sources is not applicable.

COMPLIANCE PLAN

No compliance plan was included in the application or in the permit.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-490.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
12	200,000 gallon aboveground storage tank (AST) (distillate oil)	9 VAC 5-80-720 B	VOC	--
15	Parts Cleaner	9 VAC 5-80-720 B	VOC	--
18	Oil/Water Separator	9 VAC 5-80-720 B	VOC	--
19	Cooling Tower	9 VAC 5-80-720 A	--	--
20	10,000 gallon AST (lubricating oil)	9 VAC 5-80-720 B	VOC	--
21	500 gallon AST (diesel)	9 VAC 5-80-720 B	VOC	--
22	5,000 gallon AST (diesel)	9 VAC 5-80-720 B	VOC	--
23	500 gallon AST (waste oil)	9 VAC 5-80-720 B	VOC	--
25	500 gallon AST (diesel)	9 VAC 5-80-720 B	VOC	--
26	500 gallon AST (gasoline)	9 VAC 5-80-720 B	VOC	--

¹The citation criteria for insignificant activities are as follows:

- 9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
- 9 VAC 5-80-720 B - Insignificant due to emission levels
- 9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the permit application are suitable for public review.

PUBLIC PARTICIPATION

A public notice regarding the draft permit was placed in *The Journal*, in King George, Virginia, on August 20, 2014. EPA was sent a copy of the draft permit and notified of the public notice on August 19, 2014. All persons on the Title V mailing list were sent a copy of the public notice by either electronic mail or in letters on August 19, 2014. Maryland and the District of Columbia were sent a copy of the public notice by either electronic mail or in letters on August 19, 2014.

The 30-day public comment period ran from August 20, 2014 through September 19, 2014. No public comments were received during the 30-day public comment period. With email sent on September 10, 2014, EPA Region III's Cathleen Van Osten provided comments on the proposed permit. DEQ discussed the comments with Ms. Van Osten on September 17, 2014, and followed up with a written response to her later the same day. On September 22, 2014, Ms. Van Osten sent email to DEQ stating that "given the information provided in the attachment [of the September 17, 2014, email from DEQ], EPA has no further comments on the permit."

ATTACHMENTS

- Attachment A - 2013 CEDS Facility Pollutant Emissions Report
- Attachment B - Prevention of Significant Deterioration Permit dated 04/23/2014
- Attachment C - Emission Calculations
- Attachment D - CAIR Renewal Application
- Attachment E - Compliance Assurance Monitoring Plans
- Attachment F - Inapplicable Requirements Identified by the Facility
- Attachment G - EPA Letter (dated 7/24/1996), EPA e-mail (dated 3/14/2007), and DEQ Letter (dated 7/31/1996) for SO₂ CEMS Span