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**AIR AND RADIATION ADMINISTRATION  
DRAFT PART 70 OPERATING PERMIT**

**DOCKET # 24-003-0468**

**COMPANY:** Raven Power Ft. Smallwood LLC

**LOCATION:** 1005 Brandon Shores Road, Suite 100  
Baltimore, MD 21226

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**MARYLAND DEPARTMENT OF THE ENVIRONMENT  
AIR AND RADIATION ADMINISTRATION  
AIR QUALITY PERMITS PROGRAM**

**PART 70/ TITLE V OPERATING PERMIT PROGRAM OVERVIEW**

**Origin of the Part 70 Operating Permit**

Title V of the Clean Air Act (amended) requires each state to implement a federally enforceable operating permit program for major sources of air pollution. This program, the Part 70 Permit Program, also known as the Title V Permit Program, is designed to provide a comprehensive administrative document (a Part 70 Permit) that will identify all air emissions sources at a given facility with the applicable federal regulations, and will establish the methodology by which the owner/operator will demonstrate compliance. Required testing, monitoring, record-keeping, and reporting for each emissions source are identified, including regulation citation. This Operating Permit is a five-year renewable permit. A responsible official for each facility subject to a Part 70 Operating Permit is required to annually certify compliance with each applicable requirement for that facility.

The Department has had an Air Quality Operating Permit program for many years. The State-Only enforceable permit conditions and applicable regulations listed in Air Quality Permits to Construct issued to a facility will be incorporated into the Part 70 Operating Permit in a separate section. The Department will continue to enforce these state-only requirements. The Part 70 Operating permit will supersede a facility's current State Permit to Operate upon issuance.

Part 70 Operating permits are not for new construction, and do not add any new emissions limitations, standards, or work practices on an affected facility. There may, however, be additional testing, record keeping, monitoring, and reporting requirements. A few facilities which were not subject to Maryland's existing State Permit to Operate Program will be subject to the requirements of the Part 70 Program. The Part 70 Program is based on a facility's potential to emit regulated air pollutants. The State Permit to Operate program is based on types of sources specifically listed in the Code of Maryland Regulations (COMAR). For these few facilities which were not required to receive a state Permit to Operate but are subject to a Part 70 permit, there will be the additional burdens of certifying emissions annually and paying an annual emissions-based permit fee.

**Part 70 Permit Issuance Process**

The Department will undertake a technical review of the Part 70 permit application and will prepare a draft Permit and Fact Sheet. The Fact Sheet will explain the basis and technical analysis used by the Department to develop federally enforceable permit conditions, including the required testing, monitoring, record keeping, and reporting provisions for each emissions unit at the permitted facility. The Fact Sheet will also include a description of the facility operations and the current compliance status with applicable requirements. If there are any discrepancies between the Part 70 permit application and the draft permit, the Fact Sheet will contain a discussion of the inconsistencies and the final resolution.

The Part 70 Program provides the public, adjacent states, and EPA the opportunity to review and submit comments on draft Part 70 permits. The public may also request a public hearing on the draft permit. Dockets containing a facility's permit application, supporting documents, draft Permit and Fact Sheet will be available for review both at MDE headquarters located at 1800 Washington Boulevard, Baltimore, MD and a public library near the facility's location. Please note: during Covid restrictions, the dockets will be made available on-line only at:  
<https://mde.maryland.gov/programs/Permits/AirManagementPermits/Pages/title5draftpermits.aspx>

## **Public Participation Process**

The initial step of the Part 70/ Title V public participation process is the publication of a notice of intent to issue a Part 70 Permit and opportunity for concerned citizens to submit written comments and/ or request a public hearing. The Department will publish the notice at least one time in the legal section of a newspaper of general circulation in the area where the facility is located. The Notice will provide the description of the facility for which a Part 70 permit has been drafted, the location of the docket which contains the application and draft permit conditions with supporting documentation, and the requirements for requesting a public hearing. The applicant is responsible for all costs incurred in the publication of this legal notice. The Department will also send notification to adjacent states, local public officials and interested parties, will include the notice in the docket at the library, and/or post the notice to the Department's website.

The public will have 30 days from the date the notice appears in the newspaper to submit written comments to the Department, or to request in writing a public hearing. Adjacent states will have 30 days from the receipt of notification to submit written comments to the Department.

A request for a public hearing must be made in writing within the 30-day comment period. Comments and hearing requests should be sent to the attention of the Air Quality Permits Program Public Participation Coordinator, Ms. Shannon Heafey via email at [Shannon.heafey@maryland.gov](mailto:Shannon.heafey@maryland.gov) or mailed to The Air and Radiation Administration, 1800 Washington Boulevard, Suite 720, Baltimore, MD 21230-1720.

## **Public Hearing**

The purpose of a public hearing is to give interested parties the opportunity to submit comments for the record which are germane to the draft federally enforceable permit conditions. Comments submitted at the hearing, or in writing to the Department during the comment period, should address errors and deficiencies in the permit such as unidentified emissions units, incorrect or deficient regulation citation, deficient record keeping, monitoring, reporting or testing requirements and unresolved compliance issues.

If a public hearing is requested, the Department will make arrangements with the facility to schedule a hearing and will send notification of the hearing to public officials, interested parties, and the EPA. The Department will publish a notice of the scheduled hearing in the legal section of the same newspaper in which the opportunity notification appeared, at least one time and at least 30 days prior to the hearing. The notice will state the date, time, and location of the hearing. During Covid restrictions, public hearings may be held on-line. This public notice will also be posted on the MDE Air Permits Program web page.

After the public comment period has closed, the Department will review the formal testimony as part of the final review and prepare a Response to Comments document which will be sent to the EPA along with the draft Part 70 Permit and Fact Sheet.

Testimony on state-only requirements will be kept on file at the Department as part of the formal record, however, state-only rules and regulations are not federally enforceable, and therefore are not within the scope of the EPA review. The Department will keep a record of the identity of the commentors, their statements, a summary of the issues raised during the public comment period, and the Response to Comments document for at least five years.

### **Citizen Petition to EPA to Object to Permit Issuance**

Interested parties may petition the EPA to object to the Part 70 Permit if the EPA has not already objected, within 60 days after the 45-day EPA review period has ended. The petition period will be posted on the EPA website. The EPA will only consider objections to the federally enforceable provisions of the draft permit which were raised with reasonable specificity during the public comment period, unless: (1) the petitioner demonstrates that it was impractical to raise the objections within the public comment period, or (2) the grounds for the objection arose after the comment period. If the EPA agrees with the petition, the Department will reopen, revise, or revoke the permit as determined.

### **Applicant Objection to Permit Issuance and Recourse**

If the applicant objects to the federally enforceable permit conditions contained in the issued Part 70/Title V Operating permit, it has 15 days from receipt of the issued Permit to request a contested case hearing. More information on that can be found in 40CFR70, and COMAR 26.11.03.11.



**MARYLAND DEPARTMENT OF THE ENVIRONMENT  
AIR AND RADIATION ADMINISTRATION**

**NOTICE OF INTENT TO ISSUE PART 70 OPERATING PERMIT, OPPORTUNITY TO SUBMIT  
WRITTEN COMMENTS OR TO REQUEST A PUBLIC HEARING**

The Department of the Environment, Air and Radiation Administration (ARA) has completed its review of the application for a Renewal Part 70 Operating Permit submitted by Raven Power Ft. Smallwood, LLC, located in Anne Arundel County, MD. The facility has two generating stations (Brandon Shore) which consists of two (2) coal-fired generating units, two (2) No. 2 fuel oil-fired auxiliary boilers and two (2) 500 horsepower (hp) emergency diesel fired internal combustion quench pumps and (H.A.Wagner), which consists of three (3) steam-electric generating units with a combined nominal rating of approximately 905 MW, one (1) natural gas fired boiler and a No. 2 oil-fired combustion turbine.

The applicant is represented by:

Edwin Much, Regional Environmental Director  
Raven Power Fort Smallwood, LLC  
1005 Brandon Shores Road, Suite 100  
Baltimore, MD 21226

The Department has prepared a draft Part 70 Operating Permit for review and is now ready to receive public comment. A docket containing the draft permit, application, supporting documentation and fact sheet is available for review. Docket #24-003-0468 is available for public inspection on the Department's website at the following link:

(<https://mde.maryland.gov/programs/Permits/AirManagementPermits/Pages/title5draftpermits.aspx>)

Interested persons may submit written comments or request a public hearing on the draft permit. Written comments must be received by the Department no later than 30 days from the date of this notice. Requests for a public hearing must be submitted in writing and must also be received by the Department no later than 30 days from the date of this notice.

Comments and requests for a public hearing will be accepted by the Department if they raise issues of law or material fact regarding applicable requirements of Title V of the Clean Air Act, and/or regulations implementing the Title V Program in Maryland found in COMAR.

A Request for public hearing shall include the following:

- 1) The name, mailing address, and telephone number of the person making the request;
- 2) The names and addresses of any other persons for whom the person making the request if representing; and
- 3) The reason why a hearing is requested, including the air quality concern that forms the basis for the request and how this concern relates to the person making the request.

All written comments and requests for a public hearing should be directed to the attention of Ms. Shannon Heafey, Title V Coordinator, via email at [Shannon.heafey@maryland.gov](mailto:Shannon.heafey@maryland.gov), or mailed to The Air Quality Permits Program, Air and Radiation Administration, 1800 Washington Boulevard Suite 720, Baltimore, Maryland 21230-1720.

Further information may be obtained by emailing Ms. Heafey or calling (410) 537-4433.

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**BACKGROUND**

Raven Power (Raven) operates Brandon Shores and H.A. Wagner (Wagner) generating stations at a complex located at 1005 Brandon Shores Drive, Baltimore Maryland (Fort Smallwood Complex). The two (2) generating stations are co-located on a 456-acre site. Emissions from both generating stations are aggregated for permitting purposes and thus the entire complex operates under one Title V permit. The SIC code of Fort Smallwood is 4911.

The Fort Smallwood Complex is located in northern Anne Arundel County, on the Patapsco River, off Fort Smallwood Road. The Complex is comprised of two generating stations and a warehouse.

The primary emission units at **Brandon Shores** are two (2) coal-fired generating units with a combined nominal generating capacity of approximately 1,370 megawatts (MW). Each unit has a rated capacity of 7,128 million British thermal units per hour (MMBtu/hr.). Unit #1 (MDE Registration #3-0015) was placed in commercial service in 1984, and Unit #2 (MDE Registration #3-0016) was placed in commercial service in 1991. Both units are Babcock and Wilcox (B&W) solid fossil fuel-fired (coal), dry bottom boilers with circular wall burners. No. 2 fuel oil is used for start-up and main burner ignition. Coal is transferred to the plant storage bunker via conveyor belts, after which the coal is pulverized and blown into the furnace. Unit #1 is equipped with overfire air and low nitrogen oxide (NO<sub>x</sub>) burners. Unit #2 is equipped with low NO<sub>x</sub> burners and BOOS (burners out of service). Currently for each unit, the flue gas is passed through hot-side electrostatic precipitators (ESPs) and selective catalytic reduction (SCR) to reduce NO<sub>x</sub> emissions. The gas is then treated with a dry sorbent injection system for the control of sulfuric acid mist and powdered activated carbon (PAC) injection system for the control of mercury (Hg) and passed through fabric filter baghouses to collect the particulate matter (PM) emissions, followed by a flue gas desulfurization (FGD) system for the removal of sulfur dioxide (SO<sub>2</sub>). Ash is collected from the ESP hoppers and conveyed pneumatically to storage silos from where it is loaded into trucks for final disposition. Both units are equipped with continuous emissions monitoring systems (CEMS) for NO<sub>x</sub>, SO<sub>2</sub>, carbon dioxide (CO<sub>2</sub>), Hg and PM.

*(Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).*

Brandon also has two (2) No. 2 fuel oil-fired auxiliary boilers (MDE Registrations #4-0507 and #4-0508) each rated at 145 MMBtu/hr. used for supplying steam to Brandon Shores. *(Aux boiler 1 received permit to construct in 2022 to add natural gas firing capability; modification expected to be completed by Dec 31,2025).*

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Brandon Shores has two (2) 500 horsepower (hp) emergency diesel fired internal combustion quench pumps (MDE Registration #9-0988) used to provide water to the FGD equipment in the case of emergencies. Brandon Shores also has material handling operations for coal and fly ash (MDE Registration #6-1143), as well as for limestone and gypsum (MDE Registrations #6-1149 and #6-1150) that includes the transfer of material using conveyors and storage in large outdoor piles. Fugitive emissions of PM from these operations are controlled through the use of enclosures, and/or wet suppression. Raven also operates a 670 HP emergency generator at Brandon Shores, which was installed in 1979, that is used to supply electricity during emergency situations.

The primary emission units at **Wagner** are three (3) steam-electric generating units with a combined nominal rating of approximately 905 MW and one (1) natural gas fired boiler. Unit #1 (MDE Registration #5-0489) is a natural gas-fired and residual oil-fired B&W dry bottom wall-fired boiler, which began operation in 1956. Unit #1 is rated at 1,337 MMBtu/hr. and is controlled by a cold side ESP. Unit #1 is equipped with a CEMS for NO<sub>x</sub> and CO<sub>2</sub> and COMS for opacity. Unit #2 (MDE Registration #3-0017) is a natural gas fired B&W dry bottom wall-fired boiler equipped with low NO<sub>x</sub> burners, which began operation in 1959 (*modified in 2020-fuel switch from coal fired to natural gas fired*) and rated at 250 MMBtu/hr. Unit #3 (MDE Registration #3-0003) is a B&W coal-fired, once-through supercritical steam boiler, which began operation in 1966. Unit #3 is rated at 2,740 MMBtu/hr. and is controlled by an SCR for NO<sub>x</sub> control, PAC injection for Hg control, and a cold-side ESP for PM control. Unit #3 is equipped with CEMS for NO<sub>x</sub>, CO<sub>2</sub>, SO<sub>2</sub> and Hg and COMS for opacity. (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*). Unit #4 (MDE Registration #4-0017) is a B&W dry bottom wall-fired residual oil-fired steam boiler, which began operation in 1972. Unit #4 is rated at 4,200 MMBtu/hr. and is controlled by a multiple cyclone for the control of PM. Unit #4 is equipped with CEMS for NO<sub>x</sub> and CO<sub>2</sub> and COMS for opacity. All four units use natural gas for startup and main burner ignition. Ash from the coal boilers is collected from the ESP hoppers and conveyed pneumatically to storage silos from where it is loaded into trucks for final disposition. Wagner also has a No. 2 oil-fired combustion turbine (MDE Registration #4-0007) used to supply "black-start" capability and for peaking operation. In addition, material handling operations of coal and ash (MDE Registration #6-1144) are performed at Wagner, which generate fugitive emissions of PM. These handling operations include the transfer of material using conveyors, the crushing of coal, and storage in large outdoor piles. Fugitive emissions of PM from these operations are controlled through the use of enclosures and/or wet suppression. A CPCN (Case #9338) was also issued on July 30, 2014, that permits the construction of hydrated lime handling facilities at Wagner, related to the addition of a dry

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sorbent (hydrate lime and/or Trona) injection system on Wagner Unit#3. These facilities which will consist of processes for the receiving and handling of sorbent, and the storage of sorbent in up to four (4) silos. In addition, the CPCN issued on July 30, 2014, authorized the combustion of bituminous coal, sub-bituminous coal, or any blend of bituminous and sub-bituminous coal at Wagner Unit #3.

The following table summarizes the actual emissions from Raven Power Fort Smallwood, LLC based on its Annual Emission Certification Reports:

**Table 1: Actual Emissions**

Year	NO <sub>x</sub> (TPY)	SO <sub>x</sub> (TPY)	PM <sub>10</sub> (TPY)	CO (TPY)	VOC (TPY)	Total HAP (TPY)
2021	1183	2142	19.1	3498	44.8	16.5
2020	555	1303	12	984	13.8	7.1
2019	1130	2765	23	308	36	21
2018	2290	6701	47	600	71	43
2017	1782	3939	30	461	54	25

The major source threshold for triggering Title V permitting requirements in Anne Arundel County is 25 tons per year for VOC and NO<sub>x</sub>, and 100 tons per year for any other criteria pollutants and 10 tons for a single HAP or 25 tons per year for total HAPS. Since the actual NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, CO, VOC emission from the facility are greater than the major source threshold, Fort Smallwood Complex is required to obtain a Title V – Part 70 Operating Permit under COMAR 26.11.03.01.

The Department, on September 30, 2020, received the Fort Smallwood Complex’s Part 70-permit renewal application, which was submitted by Raven Power Fort Smallwood, LLC. An administrative completeness review was conducted, and the application was deemed complete. A completeness determination letter was sent to Raven Power Fort Smallwood, LLC on October 7, 2020, granting Fort Smallwood Complex an application shield.

**CHANGES AND MODIFICATIONS TO THE PART 70 OPERATING PERMIT**

The following changes and/or modifications have been incorporated into the renewal Title V – Part 70 Operating Permit for Fort Smallwood Complex:

- On December 19, 2020, the facility was issued a permit to construct for the modification of Wagner Unit 2 (**FSC-HAW-Unit2**) [033-0468-3-0017]. The boiler was changed from a coal-fired unit to a natural gas fired

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industrial boiler with a new heat input rating of 250 MMBtu/hr. The change was made in response to a Consent Decree issued December 4, 2019.

- On December 23, 2020 – Final Letter: Acceptance of Raven Power Wagner Unit 3 Trona analysis. Response to a letter dated October 16, 2020, to MDE and DNR PPRP providing an air emission analysis demonstration for a change in sorbent for Wagner Unit 3. “CPCN Case No. 9338 Condition B-I-3-e states that a sorbent other than hydrated lime may be used after (1) demonstrating that the air emissions using the different sorbent are not materially higher than those provided for the use of hydrated lime in the Wagner Mercury and Air Toxics Standards (MATS) Project application and (2) acceptance of the documented emissions analysis is received from PPRP and MDE. In the October 16, 2020, letter, Raven Power provided such an air emission analysis demonstration for the use of Trona (sodium sesquicarbonate) as an alternative to the hydrated lime currently used on Wagner Unit 3 and requested MDE’s and PPRP’s acceptance of this analysis.”
- On June 29, 2022 – A Permit to Construct was issued for the modification of Wag 3 (**FSC-HAW-Unit3**), BS 1 (**FSC-BS-Unit1**) and BS 2 (**FSC-BS-Unit2**) and BS Aux 1 (**FSC-BS-AuxBlr1**) boiler. Wag 3 fuel switch primary fuel to a blend of residual oil and distillate oils; BS 1 & BS 2 switch primary fuel to No. 2 fuel oil; and BS Aux 1 boiler to add natural gas firing capability. Modification expected to be completed by December 31, 2025.

**MACT and NSPS**

Fort Smallwood Complex is a major source of HAPs and is subject to the following MACT standards (40 CFR Part 63):

1. Subpart UUUUU—National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units (**FSC-BS-Unit1 and FSC-BS-Unit2; FSC-HAW-Unit1; FSC-HAW-Unit3 and FSC-HAW-Unit4**)
2. Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (**FSC-BS-AuxBlr1 and FSC-BS-AuxBlr2 & FSC-HAW-Unit2**).
3. Subpart ZZZZ—National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (**FSC-BS-EG**)

Fort Smallwood Complex is subject to NSPS (40 CFR Part 60):

1. Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (**FSC-BS-QP**)

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2. Subpart Y—Standards of Performance for Coal Preparation and Processing Plants (**FSC-BS-MH and FSC-HAW-MH**)
3. Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants (**FSC-BS-LSH and FSC-BS-GH**)
4. Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (**FSC-BS-Unit1 and FSC-BS-Unit2**) **Note:** For Particulate Matter (PM) Unit 1 and 2 will comply with the Subpart Da PM standard.

Fort Smallwood Complex is subject to the NO<sub>x</sub> Reasonably Available Control Technology (RACT) requirements, Acid Rain Program, and the Cross State Air Pollution Rule (CSAPR). Fort Smallwood Complex is also subject to the requirements of the Regional Greenhouse Gas Initiative (RGGI) program which is a State-only enforceable program. Under these regulations, Fort Smallwood Complex is required to submit a RGGI permit application. The renewal RGGI permit upon issuance will be attached to the Part 70 permit.

NO<sub>x</sub> Averaging Plan Consent Order

The renewal Part 70 permit includes a new NO<sub>x</sub> RACT Averaging Plan that is applicable to Brandon Shores Units 1 and 2 and the H.A. Wagner Units 1, 2, 3, and 4. The 2016 Plan became effective upon signature of a Consent Agreement on February 18, 2016. Prior to the 2016 Consent Agreement, the units were subject to a 2012 NO<sub>x</sub> Averaging Plan. The 2012 NO<sub>x</sub> Averaging Plan was revised to remove the C.P. Crane Units 1 and 2 from the averaging plan upon the sale of the Crane Units to Avenue Capital Group. Also revised in the 2016 plan, was the requirement to reduce the total system wide NO<sub>x</sub> emissions by 30 percent. The 2012 plan required only a 5 percent system-wide reduction. The revised plan was received February 21, 2021, to reflect the modification of **Wag Unit2**. The Permittee shall amend the NO<sub>x</sub> RACT Averaging Plan to reflect **Wag 3, BS 1 and BS 2** revised NO<sub>x</sub> limit of 0.3 lbs./MMBtu and submit to the Department for review and approval within 60 days after each of the units discontinue coal combustion.

PM CEMS Consent Agreement signed April 19, 2016.

This CEMS consent agreement terminated the Opacity Consent order June 1, 2007 and established particulate matter CEM requirement.

1-Hr SO<sub>2</sub> Consent Agreement signed October 17, 2019.

The consent agreement established a federally enforceable limit designed to attain the 1-Hour SO<sub>2</sub> NAAQS in the SO<sub>2</sub> Nonattainment Area.

Regional Haze Consent Order signed July 6, 2021

The consent order established that HA Wagner shall permanently cease the combustion of coal no later than January 1, 2026.

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**Cross-State Air Pollution Rule (CSAPR)**

The U.S. Environmental Protection Agency (EPA) issued the Cross-State Air Pollution Rule (CSAPR) in July 2011 to address Clean Air Act requirements concerning interstate transport of air pollution and to replace the previous Clean Air Interstate Rule (CAIR) which the D.C. Circuit remanded to the EPA for replacement. Following the original rulemaking, CSAPR was amended by three further rules known as the Supplemental Rule, the First Revisions Rule, and the Second Revisions Rule. As amended, CSAPR requires 28 states to limit their state-wide emissions of sulfur dioxide (SO<sub>2</sub>) and/or nitrogen oxides (NO<sub>x</sub>) in order to reduce or eliminate the states' contributions to fine particulate matter and/or ground-level ozone pollution in other states. The emissions limitations are defined in terms of maximum state-wide "budgets" for emissions of annual SO<sub>2</sub>, annual NO<sub>x</sub>, and/or ozone season NO<sub>x</sub> by each state's large electricity generating units (EGUs). The emissions budgets are implemented in two phases of generally increasing stringency. As the mechanism for achieving compliance with the emissions limitations, CSAPR establishes federal implementation plans (FIPs) that require large EGUs in each affected state to participate in one or more new emission trading programs that supersede the existing CAIR emissions trading programs. On December 30, 2011, in response to petitions challenging CSAPR, the D.C. Circuit granted a stay of the rule, ordering the EPA to continue administering CAIR on an interim basis. In a subsequent decision, the Court vacated CSAPR but on April 29, 2014, the U.S. Supreme Court reversed that decision and remanded the case to the D.C. Circuit Court for further proceedings. In order to allow CSAPR to replace CAIR in an orderly manner, EPA filed a motion asking the D.C. Circuit to lift the stay and to toll, by three years, all CSAPR compliance deadlines that had not yet passed. On October 23, 2014, the Court granted the EPA's motion.

Consistent with the Court's order, compliance with CSAPR's Phase 1 emissions budgets is now required in 2015 and 2016 and compliance with the rule's Phase 2 emissions budgets and assurance provisions is now required in 2017 and beyond.

On September 7, 2016, EPA finalized the CSAPR Update, which further reduced NO<sub>x</sub> emissions from EGUs in 22 states during the ozone season, May 1 thru September 30, thereby reducing pollution transport and helping downwind states achieve and maintain the 2008 ozone standard (75 ppb). On October 26, 2016, CSAPR Update was published in the federal register, with an effective date of December 27, 2016.

On March 15, 2021, EPA finalized the Revised Cross-State Air Pollution Rule Update for the 2008 ozone National Ambient Air Quality Standards (NAAQS).

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Starting in the 2021 ozone season, the rule will require additional emissions reductions of nitrogen oxides (NO<sub>x</sub>) from power plants in 12 states, improving air quality for millions of Americans. The final rule was published in the Federal Register on April 30, 2021, with an effective date of June 29, 2021.

This renewal Part 70 permit identifies the applicable regulations of the CSAPR rule as found in 40 CFR Part 97 subparts AAAAA - NO<sub>x</sub> Annual Trading Program, subparts GGGGG - NO<sub>x</sub> Ozone Season Group 3 Trading Program, and subpart CCCCC SO<sub>2</sub> Group 1 Trading Program.

**Certificates of Public Convenience and Necessity (CPCN)**

**CPCN PSC Case No. 9338: H.A. Wagner MATS Compliance**

On January 14, 2014, Raven Power has submitted an application to the Maryland Public Service Commission (PSC) for a Certificate of Public Convenience and Necessity (CPCN) to add air pollution controls at the H.A. Wagner Generating Station (Wagner) in order to comply with 40 CFR Part 63 Subpart UUUUU – commonly referred to as the “Utility MACT” or “MATS Rule”. This application would allow Wagner 2 to use sub-bituminous coal to comply with MATS; Wagner Unit 3 would use Dry Sorbent Injection (DSI). The CPCN (PSC Case No. 9338) was issued July 30, 2014.

**CPCN PSC Case No. 9271: The Merger of Exelon Corporation and Constellation Energy**

Letter from Exelon to David Collins of the PSC, dated December 4, 2012, CPCN Case No. 9271, states the approval of the merger of Exelon Corporation and Constellation Energy. This CPCN required the divestiture of three generation facilities – Brandon Shores, H.A. Wagner, and C.P. Crane. Exelon closed the sale of the divested assets with Raven Power Holdings, LLC on November 30, 2012.

**CPCN PSC Case No. 9075: Brandon Shores Units 1 & 2 Air Pollution Controls**

On November 28, 2006, Constellation Power Source Generation, Inc. (CPSG) filed for an application with the Maryland Public Service Commission (PSC) for an amendment to its' Certificate of Public Convenience and Necessity (CPCN) to add air pollution controls at the Brandon Shores Generating Station. The final order and issuance of the CPCN (PSC Case No. 9075) became effective June 2, 2007. The application was for the modification of the existing facility with the installation of air pollution control equipment including but not limited to the following: a wet flue gas desulfurization (FGD) system, fabric filters baghouses, sorbent injection system and associated equipment for the control of sulfuric acid mist (SAM) and SO<sub>2</sub> emissions, mercury (Hg), and particulate matter (PM)



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emissions with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>). In addition, the heat input was increased from 6173 MMBtu/hr. to 7128 MMBtu/hr. in order to recover loss of net generation capacity from the installation of the FGD scrubbers.

The modification also includes the addition of material handling equipment for limestone, gypsum by products and hydrated lime, reconfigured coal yard, handling and storage systems for water and wastewater treatment, and two diesel fired quench pumps rated at no more than 500-hp. This modification was required in order to satisfy the requirements of Maryland's recently enacted Healthy Air Act (HAA) of 2006.

**CPCN PSC Case No. 9083: H.A. Wagner Air Pollution Controls**

On November 1, 2006, Constellation Power Source Generation, Inc. (CPSG) submitted an application to the Maryland Public Service Commission (PSC) for a Certificate of Public Convenience and Necessity (CPCN) to add air pollution controls at the H.A. Wagner Generating Station (Wagner). The final order and issuance of the CPCN (PSC Case No. 9083) became effective May 8, 2007. The modification consists of the addition of air pollution control systems for the two coal-fired units at Wagner (Units 2 and 3) designed to reduce emissions in compliance with Maryland's recently enacted Healthy Air Act (HAA) of 2006. The coal fired units are the only units subject to the HAA.

The proposed modifications at Wagner, referred to as the "Air Pollution Control (APC) Project" includes three alternatives for reducing NO<sub>x</sub> from Unit 2 (Unit 3 is already equipped with NO<sub>x</sub> controls) and two alternatives to reduce Hg from both Unit 2 and Unit 3. The NO<sub>x</sub> alternatives are various forms of non-catalytic reduction technologies. The mercury alternatives involve injection of various sorbents at different locations.

The Wagner Air Pollution Control (APC) Project also includes the following new or modified systems:

- a) For Wagner Unit 2, installation, and operation of any or all of the following NO<sub>x</sub> control systems: ROFA® or equivalent, Rotamix® or equivalent, and/or selective non-catalytic reduction (SNCR) (*No longer apply since modification in December 2020*).
- b) For both Wagner Units 2 and 3, installation and operation of the following for mercury control: furnace sorbent injection (FSI) using MinPlus sorbent or equivalent, and/or activated carbon injection (ACI) or equivalent reagent/sorbent; and
- c) Solid reagent and sorbent material handling equipment.

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**COMPLIANCE ASSURANCE MONITORING**

Fort Smallwood Complex conducted a Compliance Assurance Monitoring (CAM) analysis for the facility and determined that particulate matter emissions from the FSC-HAW-Unit1, FSC-HAW-Unit3 and FSC-HAW-Unit4 (ESP) are subject to CAM requirements. The renewal application was submitted to the Department with a CAM analysis and plan for particulate matter emissions from the units (FSC-HAW-Unit1, FSC-HAW-Unit3 and FSC-HAW-Unit4).

FSC-BS-Unit1 and FSC-BS Unit2 operate PM CEMS, SO<sub>2</sub> CEMS and NO<sub>x</sub> CEMS to demonstrate continuous compliance with applicable standards and therefore they are not subject to CAM requirements.

CAM is intended to provide a reasonable assurance of compliance with applicable requirements under the Clean Air Act for large emission units that rely on air pollution control (APC) equipment to achieve compliance. The CAM approach establishes monitoring for the purpose of: (1) documenting continued operation of the control measures within ranges of specified indicators of performance (such as emissions, control device parameters, and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements; (2) indicating any excursions from these ranges; and (3) responding to the data so that the cause or causes of the excursions are corrected. In order for a unit to be subject to CAM, the unit must be located at a major source, be subject to an emission limitation or standard; use a control device to achieve compliance; have post-control emissions of at least 100% of the major source amount (for initial CAM submittals); and must not otherwise be exempt from CAM. Applicability determinations are made on a pollutant-by-pollutant basis for each emission unit.

**GREENHOUSE GAS (GHG) EMISSIONS**

Fort Smallwood Complex emits the following greenhouse gases (GHGs) related to Clean Air Act requirements: carbon dioxide, methane, and nitrous oxide. These GHGs originate from various processes (i.e., boilers and internal combustion engine) contained within the facility premises applicable to Fort Smallwood Complex. The facility has not triggered Prevention of Significant Deterioration (PSD) requirements for GHG emissions; therefore, there are no applicable GHG Clean Air Act requirements. While there may be no applicable requirements as a result of PSD, emission certifications report for the years 2018, 2019, and 2020, showed that Fort Smallwood Complex is a major source (threshold: 100,000 tpy CO<sub>2</sub>e) for GHG's (see Table 2 shown below). The

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Permittee shall quantify facility wide GHGs emissions and report them in accordance with Section 3 of the Part 70 permit.

The following table summarizes the actual emissions from Fort Smallwood Complex based on its Annual Emission Certification Reports:

**Table 2: Greenhouse Gases Emissions Summary**

<b>GHG</b>	<b>Conversion factor</b>	<b>2018 tpy CO<sub>2</sub>e</b>	<b>2019 tpy CO<sub>2</sub>e</b>	<b>2020 tpy CO<sub>2</sub>e</b>
Carbon dioxide CO <sub>2</sub>	1	6,082,487	3,047,584	1,376,438
Methane CH <sub>4</sub>	25	710	408.51	160.5
Nitrous Oxide N <sub>2</sub> O	298	103	52.3	23.4
<b>Total GHG CO<sub>2</sub>eq</b>		<b>6,083,302</b>	<b>3,048,044.9</b>	<b>1,376,621.95</b>

**EMISSION UNIT IDENTIFICATION**

Raven Power Fort Smallwood Complex has identified the following emission units as being subject to Title V permitting requirements and having applicable requirements.

**Table 3: Emission Unit Identification**

<b>Emissions Unit Number</b>	<b>MDE – ARA Registration Number</b>	<b>Emissions Unit Name and Description</b>	<b>Date of Installation</b>
FSC-BS-Unit1	3-0015	Brandon Shores Unit 1 is a solid fossil fuel fired generating unit with No.2 oil used for start-up purposes. The Unit is also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site. The reburning of fly ash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC). The emissions from Brandon Shores Unit 1 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse, and a flue gas desulfurization (FGD) system prior to being	05/1984; Modification expected to be completed by Dec 31, 2025

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<b>Emissions Unit Number</b>	<b>MDE – ARA Registration Number</b>	<b>Emissions Unit Name and Description</b>	<b>Date of Installation</b>
		discharged through a single stack. (Emission Point: FSC-BS-Unit1-EP1). <i>(Permit to construct issued in 2022 for fuel switch from coal fired to blend of residual oil and distillate oils; Modification expected to be completed by Dec 31, 2025)</i>	
FSC-BS-Unit2	3-0016	Brandon Shores Unit 2 is a solid fossil fuel fired generating unit with No.2 oil used for start-up purposes. The Unit is also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site. The reburning of fly ash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC). The emissions from Brandon Shores Unit 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse and a flue gas desulfurization (FGD) system prior to being discharged through a single stack. (Emission Point: FSC-BS-Unit2-EP1). <i>(Permit to construct issued in 2022 for fuel switch from coal fired to blend of residual oil and distillate oils; Modification expected to be completed by Dec 31, 2025)</i>	05/1991; Modification expected to be completed by Dec 31, 2025
FSC-BS-AuxBlr1	4-0507	#1 Auxiliary Boiler: Zurn (Model 18M Keystone) is a No. 2 oil fired boiler used for supplying steam to Brandon Shores Station. The emissions from #1 Auxiliary Boiler are discharged through a single stack. (Emission Point: FSC-BS-AuxBlr1-EP1). <i>(Aux boiler 1 received permit to construct in 2022 to add natural gas firing capability; modification expected to be completed by Dec 31, 2025).</i>	05/1973; Modification expected to be completed by Dec 31, 2025
FSC-BS-AuxBlr2	4-0508	#2 Auxiliary Boiler: Zurn (Model 18M Keystone) is a No. 2 oil fired boiler used for supplying steam to Brandon Shores Station. The emissions from #2 Auxiliary	05/1973

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<b>Emissions Unit Number</b>	<b>MDE – ARA Registration Number</b>	<b>Emissions Unit Name and Description</b>	<b>Date of Installation</b>
		Boiler are discharged through a single stack (Emission Point: FSC-BS-AuxBlr2-EP1).	
FSC-BS-MH	6-1143	The Brandon Shores material handling system consists of various equipment and processes to transport coal, fly ash, hydrated lime or equivalent, powdered activated carbon and other materials. There are facilities to mix coal with additives to reduce stack emissions. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment.	05/1973
FSC-BS-LSH	6-1149	The Brandon Shores limestone handling system consists of various equipment and processes to handle limestone. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment.	12/2009
FSC-BS-GH	6-1150	The Brandon Shores gypsum handling system consists of various equipment and processes to handle gypsum. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment.	12/2009
FSC-BS-QP	9-0988	The Quench Pumps are two (2) 500 HP diesel-fired internal combustion engines that are used to supply water to the flue gas desulfurization (FGD) system in case of emergencies.	12/2009
FSC-BS-EG	N/A	The emergency generator is a 670 HP diesel-fired internal combustion engine installed at the facility to provide back-up power.	1979
FSC-HAW-Unit1	5-0489	H.A. Wagner Unit 1 is a residual oil or natural gas fired unit (nominally rated at 133 MW). The emissions from H.A.	02/1956

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Emissions Unit Number	MDE – ARA Registration Number	Emissions Unit Name and Description	Date of Installation
		Wagner Unit 1 are passed through an electrostatic precipitator prior to being discharged through a single stack (Emission Point: FSC-HAW-Unit1-EP1).	
FSC-HAW-Unit2	3-0017	H.A. Wagner Unit 2 is a natural gas unit that no longer generates electricity and is used as an industrial boiler rated at 250-MMBtu/hr. The emissions from H.A. Wagner Unit 2 are discharged through a single stack (Emission Point: FSC-HAW-Unit2-EP1). <i>(Modified in 2020 -fuel switch from coal-fired to natural gas fired).</i> <b>June 1, 2020, ceased combusting coal and generating electricity.</b>	01/1959; Modified 2020
FSC-HAW-Unit3	3-0003	H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up (nominally rated at 359 MW). The emissions from H.A. Wagner Unit 3 pass through an SCR, a dry sorbent injection (hydrated lime or equivalent), a powdered activated carbon (PAC) injection system, and an electrostatic precipitator prior to being discharged through a single stack. (Emission Point: FSC-HAWUnit3-EP1). <i>(Permit to construct issued in 2022 for fuel switch from coal fired to blend of residual oil and distillate oils; Modification expected to be completed by Dec 31, 2025)</i>	08/1966; Modification expected to be completed by Dec 31, 2025
FSC-HAW-Unit4	4-0017	H.A. Wagner Unit 4 is a residual oil-fired unit with natural gas fired used for start-up (nominally rated at 415 MW). The emissions from H.A. Wagner 4 are passed through mechanical collectors prior to being discharged through a single stack (Emission Point: FSC-HAW-Unit4-EP1).	08/1972
FSC-HAW-CT	4-0007	H.A. Wagner combustion turbine is a No. 2 oil fired combustion turbine used to supply “black start” capability to H.A. Wagner and for peaking operation. The emissions from the combustion turbine are passed through	08/1967

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<b>Emissions Unit Number</b>	<b>MDE – ARA Registration Number</b>	<b>Emissions Unit Name and Description</b>	<b>Date of Installation</b>
		a single stack (Emission Point: FSC-HAW-CT-EP1)	
FSC-HAW-MH	6-1144	The H.A. Wagner material handling system consists of various equipment and processes to transport coal, fly ash, hydrated lime or equivalent, powdered activated carbon and other materials. There are facilities to mix coal with additives to reduce stack emissions. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment.	05/1956

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**AN OVERVIEW OF THE PART 70 PERMIT**

The Fact Sheet is an informational document. If there are any discrepancies between the Fact Sheet and the Part 70 permit, the Part 70 permit is the enforceable document.

Section I of the Part 70 Permit contains a brief description of the facility and an inventory list of the emissions units for which applicable requirements are identified in Section IV of the permit.

Section II of the Part 70 Permit contains the general requirements that relate to administrative permit actions. This section includes the procedures for renewing, amending, reopening, and transferring permits, the relationship to permits to construct and approvals, and the general duty to provide information and to comply with all applicable requirements.

Section III of the Part 70 Permit contains the general requirements for testing, record keeping and reporting; and requirements that affect the facility as a whole, such as open burning, air pollution episodes, particulate matter from construction and demolition activities, asbestos provisions, ozone depleting substance provisions, general conformity, and acid rain permit. This section includes the requirement to report excess emissions and deviations, to submit an annual emissions certification report and an annual compliance certification report, and results of sampling and testing.

Section IV of the Part 70 Permit identifies the emissions standards, emissions limitations, operational limitations, and work practices applicable to each emissions unit located at the facility. For each standard, limitation, and work practice, the permit identifies the basis upon which the Permittee will demonstrate compliance. The basis will include testing, monitoring, record keeping, and reporting requirements. The demonstration may include one or more of these methods.

Section V of the Part 70 Permit contains a list of insignificant activities. These activities emit very small quantities of regulated air pollutants and do not require a permit to construct or registration with the Department. For insignificant activities that are subject to a requirement under the Clean Air Act, the requirement is listed under the activity.

Section VI of the Part 70 Permit contains State-only enforceable requirements. Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate



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to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

**REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE  
METHODOLOGY**

**Emissions Units: FSC-BS-Unit1 and FSC-BS-Unit2**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site. The reburning of fly ash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC).

Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

The units were initially permitted as oil fired units. A Certificate of Public Convenience and Necessity (CPCN 6516) was issued by the Public Service Commission on May 16, 1973 for the construction of Brandon Shores Unit 1 and 2. Because of fuel oil shortages in the 70's, the units were required to be re-permitted to burn coal, CPCN Order 65456 September 28, 1981. Since this switch was in the national interest, EPA agreed to allow Units 1 and 2 to retain affected status under New Source Performance Standards Subpart D rather than become subject to Subpart Da for Fossil-Fuel Fired Steam Generators. Unit1 began initial operations in May 1984. Unit2 began initial operations in May 1991.

Unit1 and Unit2 each have a rated heat input capacity of 7128 MMBtu/hr. The turbine generators are each rated at 685 megawatts. Unit1 is equipped with overfire air and low NO<sub>x</sub> burners. Unit2 is equipped with low NO<sub>x</sub> burners and BOOS (burners out of service). Emissions from Unit1 and Unit2 prior to 2010 passed through an electrostatic precipitator and, during the ozone season, through a selective catalytic reduction unit (SCR). In 2007, a CPCN was issued for the installation of a wet flue gas desulfurization (FGD) system, fabric filters baghouses, sorbent injection system and associated equipment for the control of sulfuric acid mist (SAM) and SO<sub>2</sub> emissions, mercury (Hg), and particulate matter (PM) emissions with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>). The

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new control systems came online in December 2009 for Unit1 and online for Unit2 in the spring of 2010. Units1 and 2 have continuous emissions monitoring systems (CEMS) for NO<sub>x</sub>, SO<sub>2</sub>, and CO<sub>2</sub> and a COM for opacity. By the end of September 2010, particulate matter (PM) CEMS become operational on both units.

In order to recover net generation capacity from the loss caused from the operations of the FGD scrubber systems, the heat input rate of Units1 and 2 was increased from 6,173 MMBtu/hr. to 7,128 MMBtu/hr. The increase in capacity triggered Prevention of Significant (PSD) requirements for carbon monoxide and sulfur acid mist (SAM). To avoid PSD for particulate matter, a lower emissions limit was established. The increase also triggered Lowest Achievable Emission Rate (LAER) requirements for volatile organic compounds (VOC). Unit1 and Unit2 are allowed to use a Aqueous Chemical Additive system for reducing boiler slagging. [CPCN Non-Applicability Assessment for Full-Time Use of an Aqueous Chemical Additive System at Brandon Shores Generating Station, dated May 20, 2015].

**NSPS**

These boilers are subject to requirements of 40 CFR Part 60 Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators. **See Table IV-1a. Note:** Unit 1 and Unit 2 have particulate matter continuous emissions monitors (PEMS). Subpart D allows units that install PEMS to become subject to the PM standards of Subpart Da. Units 1 and 2 now comply with the Subpart Da PM standard.

**MACT**

These boilers are subject to the requirements of 40 CFR Part 63 Subpart UUUUU-National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units (**FSC-BS-Unit1 and FSC-BS-Unit2**). **See Table IV-12.**

**Compliance Status**

During the October 18, 2019, partial Compliance Evaluation of the Brandon Shores, **FSC-BS-Unit1** was on a planned outage (circa 9/13/2019 to circa 12/23/2019) and **FSC-BS-Unit2** was operating.

On June 30, 2021, **FSC-BS-Unit1** was stack tested. The results are as follows: Particulate Emissions.

PM (FPM & CPM) (lb./MMBtu)	PM Limit Total (FPM & CPM) (lb./MMBtu)	Filterable Particulate (FPM) (lb./MMBtu)	CPCN Limit (FPM) (lb./MMBtu)	FPM (gr/dscf @ 50% EA)	FPM Permit Limit (gr/dscf @ 50% EA)
0.009	0.034	0.004	0.015	0.002	0.03

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Lead Emissions (tested on August 13 and 14, 2019)

Lead (lb./MMBtu)	Lead (lb./hr.)
5.99E-07	0.0041

On August 28 & 29, 2019 **FSC-BS-Unit2** was stack tested. The results are as follows:  
Particulate Emissions.

PM (FPM & CPM) (lb./MMBtu)	PM Limit Total (FPM & CPM) (lb./MMBtu)	Filterable Particulate (FPM) (lb./MMBtu)	CPCN Limit (FPM) (lb./MMBtu)	FPM (gr/dscf @ 50% EA)	FPM Permit Limit (gr/dscf @ 50% EA)
0.014	0.034	0.010	0.015	0.005	0.03

Lead Emissions:

Lead (lb./MMBtu)	Lead (lb./hr.)
2.82 E-07	0.0019

**Applicable Standards and Limitations:**

**A. Control of Visible Emissions**

**1. COMAR 26.11.09.05 - Visible Emissions.**

**“A. Fuel Burning Equipment.**

**(2)** Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

**(3) Exceptions.** Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.”

**Compliance Demonstration**

COMAR 26.11.09.05C, allows for the discontinuation of a COM on fuel burning equipment that is equipped with a flue gas desulfurization device. If operation of the opacity monitor is discontinued, the regulation requires an alternative monitoring plan to be submitted to and approved by the Department which includes a schedule for monthly Method 9 visible emissions observations. As an alternative to the COMAR 26.11.01.10 requirement to use a COM and until an alternate monitoring plan is submitted and approved:

The Permittee shall perform a visible emissions observation using an EPA Reference Method 9 of the exhaust from the scrubber stack. The observation shall be performed once a week for one hour period of time.

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If after a six-month period time, no violations of the opacity limit are observed, the frequency of observation may be reduced to once per month. At any point in time that a violation of the opacity limit is observed, the observations shall return to the weekly schedule until another six-month period elapses without a violation.

**[Reference: COMAR 26.11.09.05C & COMAR 26.11.01.10]**

The Permittee shall maintain all records of Method 9 visible emissions observations. **[Reference: COMAR 26.11.03.06C]**

The Permittee shall submit to the Department results of visible emissions observations upon request. **[Reference: COMAR 26.11.03.06C]**

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.**

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**B. Control of Particulate Matter Emissions**

**1. COMAR 26.11.09.06B:** Areas III and IV. The following apply in Areas III and IV:

(2) Residual Fuel-Oil-Burning Equipment. A person may not cause or permit particulate matter caused by the combustion of residual fuel oil to be discharged into the atmosphere in excess of the amounts shown in Table 1 in Regulation .09 of this chapter.

(3) Solid Fuel Burning Equipment. “A person may not cause or permit particulate matter caused by the combustion of solid fuel to be discharged into the atmosphere in excess of the amounts shown in Table 1.” ***For these units, the maximum allowable emissions of particulate matter 0.03 gr/scfd @ 50% excess air.***

**COMAR 26.11.09.06C. Determination of Compliance (by stack test).**

“Compliance with the particulate matter emissions standards in this regulation shall be calculated as the average of 3 test runs using EPA Test Method 5 or other United States Environmental Protection Agency test method approved by the Department.”

**Compliance Demonstration**

The Permittee, in accordance with COMAR 26.11.01.04A(1), shall conduct annual testing using EPA Reference Methods of 40 CFR Part 60, Appendix A. The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date. Note: The Permittee may petition the Department to use any Method 5 QC/QA testing for the PM CEMS to satisfy the requirement of the annual compliance stack test.

The Permittee shall operate and maintain a PM CEMS to produce valid data whenever either Unit served by the PM CEMS is operating. Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter

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concentration in grains per dry standard cubic feet on a six-hour rolling average.

**[Reference: COMAR 26.11.06.03C]**

The Permittee shall maintain records of the results of all particulate emission compliance tests. **[Reference: COMAR 26.11.01.05A(2)]**

The Permittee shall maintain, in an electronic database, the six-hour rolling average emission values recorded by each PM CEMS. **[Reference: COMAR 26.11.06.03C]**

The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to test and a notice of intent to test at least 10 days prior to the scheduled test date. The Permittee shall submit the results of stack tests in a final report within 60 days from test completion.

**[Reference: COMAR 26.11.01.04A].**

The Permittee shall report to the Department all periods of excess emissions in quarterly PM CEMS reports. All data shall be reported in six hour rolling averages. **[Reference: COMAR 26.11.03.06C]**

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**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.**

**3. CPCN – Case No. 9075**

“To avoid triggering the Prevention of Significant Deterioration (PSD) applicability for PM and PM-10 for this Project:

(a) Emissions from Brandon Shores Units 1 and 2 each shall not exceed the following:

PM/PM-10: **0.015 lb./MMBtu** (filterable), as determined by (1) the average of three stack tests, or (2) if continuous emission monitoring for particulate matter is used to demonstrate compliance, a 24-hour rolling average;

Total PM/PM-10: **0.034 lb./MMBtu** (filterable and condensable), as determined by the average of three stack tests.”

**[Reference: CPCN – Case No 9075, Section VII Condition (21)(a)]**

**Compliance Demonstration**

The Permittee, in accordance with COMAR 26.11.01.04A(1), shall conduct annual testing using EPA Reference Methods of 40 CFR Part 60, Appendix A. The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date. Note: The Permittee may petition the Department to use any Method 5 QC/QA testing for the PM CEMS to satisfy the requirement of the annual compliance stack test. The Permittee shall operate and maintain a PM CEMS to produce valid data whenever either Unit served by the PM CEMS is operating. Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter concentration and calculating emissions in lbs./MMBtu on 24 hour rolling averages. The Permittee shall

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maintain, in an electronic database, the 24-hour rolling average emission values recorded by each PM CEMS. The Permittee shall report to the Department all period of excess emissions in quarterly PM CEMS. All data shall be reported in 24 hour rolling averages. **[Reference: COMAR 26.11.03.06C]**

The Permittee shall submit a report to MDE-ARA to be postmarked by the 30th day following the end of each calendar quarter that summarizes the monthly and consecutive rolling 12-month total emissions of PM, PM<sub>10</sub> separately for each boiler, the material handling operations, and for total emissions of those pollutants from the Brandon Shores facility.”

**[Reference: CPCN Case No. 9075 Section X condition 30]**

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C. Control of Sulfur Oxides

**1. COMAR 26.11.09.07: Control of Sulfur Oxides from Fuel Burning Equipment.**

“A. Sulfur Content Limitations for Fuel. A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:

(2) In Areas III and IV:

(a) **All solid fuels, 1.0 percent;**

(b) **Distillate fuel oils, 0.3 percent;** (Note: for No. 2 fuel oil on start-up)

(c) Residual fuel oils, 1.0 percent.”

**C. Request for Analyses.** Any person offering to sell or deliver fuel or any person responsible for equipment in which fuel or process gas is burned, upon request, shall submit to the Department or control officer such analyses of fuel or process gas as may be required to determine compliance with this regulation.”

**Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].**

“The owner or operator of fuel-burning equipment burning coal, with a heat input capacity of 100 million Btu per hour or greater, shall install CEMs to measure and record sulfur dioxide, nitrogen oxide, either oxygen or carbon dioxide, and flow.”

**[Reference: COMAR 26.11.01.11B(2)]**

The Permittee shall perform quality control/quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix B. **[Reference: COMAR 26.11.01.11D]**

The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E. **[Reference: COMAR 26.11.01.11E(2)].**

“(1) CEM System Downtime Reporting Requirements.

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(a) All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the breakdown.

(b) The system breakdown report required by §E(1)(a) of this regulation shall include the reason, if known, for the breakdown and the estimated period of time that the CEM will be down. The owner or operator of the CEM shall notify the Department by telephone when an out-of-service CEM is back in operation and producing data that has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in COMAR 26.11.31, and is producing data.

(2) CEM Data Reporting Requirements.

(a) All test results shall be reported in a format approved by the Department.

(b) Certification testing shall be repeated when the Department determines that the CEM data may not meet performance specifications because of component replacement or other conditions that affect the quality of generated data.

(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:

(i) The cause, time periods, and magnitude of all emissions which exceed the applicable emission standards;

(ii) The source downtime including the time and date of the beginning and end of each downtime period and whether the source downtime was planned or unplanned;

(iii) The time periods and cause of all CEM downtime including records of any repairs, adjustments, or maintenance that may affect the ability of the CEM to meet performance specifications of emission data;

(iv) Quarterly totals of excess emissions, installation downtime, and CEM downtime during the calendar quarter;

(v) Quarterly quality assurance activities;

(vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status; and

(vii) Other information required by the Department that is determined to be necessary to evaluate the data, to ensure that compliance is achieved, or to determine the applicability of this regulation.

(d) All information required by this regulation to be reported to the Department shall be retained and made available for review by the Department for a minimum of 2 years from the time the report is submitted." [Reference: COMAR 26.11.01.11E]

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**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.**

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**3. Healthy Air Act**

**COMAR 26.11.27.03C. SO<sub>2</sub> Emission Limitations.**

(1) Except as provided in §E of this regulation, annual SO<sub>2</sub> emissions from each affected electric generating unit may not exceed the number of tons in §C(2) of this regulation.

(2) Annual Tonnage Limitations.

Affected Unit	Annual SO <sub>2</sub> Tonnage Limitations Beginning
	January 1, 2013
Brandon Shores Unit 1	5,392 tons
Brandon Shores Unit 2	5,627 tons

**COMAR 26.11.27.03E. System-Wide Compliance Determinations.**

(1) Compliance with the emission limitations in §§B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.

(2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§B and C of this regulation.

(3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.

**Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].**

**COMAR 26.11.27.05 – Monitoring and Reporting Requirements**

“A. Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.”

The Permittee shall maintain records sufficient to demonstrate compliance with the requirements of the Healthy Air Act, COMAR 26.11.27. **[Reference: COMAR 26.11.01.05A].**

**COMAR 26.11.27.05 – Monitoring and Reporting Requirements**

“B. Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.



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C. Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department.”

**4. CPCN – Case No. 9075**

PSD-Best Available Control Technology (BACT) for Sulfuric Acid Mist (SAM) Emissions of SAM shall not exceed **0.027 pounds per million Btu** (3-hour average).

Compliance with this standard will be determined by the average of 3 valid stack test runs using methods approved by the Department.

**[Reference: CPCN Case No. 9075– Section V. condition (17)(b)]**

**Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the SO<sub>2</sub> continuous emission monitoring system that is used in conjunction with a data acquisition system in order to continuously monitor SAM emissions.

**[Reference: COMAR 26.11.03.06C].**

The Permittee shall operate the boilers in accordance the Operations and Maintenance Plan (the Plan). The Plan shall include a description of good combustion practices and methods to be employed to minimize SAM emissions and methods used to estimate SAM emissions.

In accordance with the Operations and Maintenance Plan, the Permittee shall continuously monitor estimated SAM emissions by using a data acquisition system to collect data from the SO<sub>2</sub> CEM and apply a factor of 0.003 SAM/SO<sub>2</sub> in order to calculate SAM emissions for recordkeeping and reporting purposes.

The Permittee may petition the Department to revise the factor based upon the results of additional compliance stack tests.

**[Reference: COMAR 26.11.03.06C and CPCN Case No. 9075, Section V condition (17)(c)]**

The Permittee shall maintain a record of the data collected by the data acquisition system which calculates SAM emissions on a continuous basis. In addition, the Permittee shall maintain all records necessary to demonstrate compliance with the Operations and Maintenance Plan, including date of occurrence and duration of any startup, shutdown and malfunctions.

**[Reference: COMAR 26.11.03.06C and CPCN Case No. 9075 – Section V condition 17c. & Section X condition 29.]**

1. “The Permittee shall submit a report to MDE-ARA to be postmarked by the 30th day following the end of each calendar quarter that:

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a) Summarizes separately the date, time, and duration of each startup, shutdown, or malfunction that occurred at Brandon Shores Units 1 and 2 and associated pollution control equipment during the prior period for the purposes of complying with BACT and LAER. The report shall include total monthly and consecutive 12-month total hours of startup, shutdown, and malfunction for each unit;

b) Summarizes the monthly and consecutive rolling 12-month total emissions of PM, PM<sub>10</sub>, **SO<sub>2</sub>**, NO<sub>x</sub>, CO, VOCs, and **SAM** separately for each boiler, the material handling operations, and for total emissions of those pollutants from the Brandon Shores facility.”

2. The Permittee shall report to the Department within 30 days after the end of each calendar quarter, any 3-hour block average estimated SAM emission values calculated by the DAS in accordance with the O&M Plan that were greater than 0.027 pounds per MMBtu while the unit was burning primary fuel.

**[Reference: COMAR 26.11.03.06C and CPCN Case No. 9075 Section X condition 30]**

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## **5. Acid Rain Provisions**

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

### **Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C]**.

The Permittee shall install, certify, operate, and maintain a SO<sub>2</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B - Monitoring Provisions. **[Reference: §75.10(a)(1) and Acid Rain Permit]**

The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75. **[Reference: See Acid Rain Permit]**

The Permittee shall comply with the reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. **[Reference: See the Acid Rain Permit]**

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## **6. Cross-State Air Pollution Rule**

**See Table IV-14: CSAPR for requirements.**

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### **D. Control of Nitrogen Oxides**

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**1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT**

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.**

**3. Healthy Air Act**

**COMAR 26.11.27.03B. NO<sub>x</sub> Emission Limitations.**

“(1) Except as provided in §E of this regulation, annual NO<sub>x</sub> emissions from each affected electric generating unit may not exceed the number of tons in §B(2) of this regulation.

(2) Annual Tonnage Limitations.

Affected Unit	Annual NO <sub>x</sub> Tonnage Limitations Beginning January 1, 2012
Brandon Shores Unit 1	2,414 tons
Brandon Shores Unit 2	2,519 tons

(3) Except as provided in §E of this regulation, ozone season NO<sub>x</sub> emissions from each affected electric generating unit may not exceed the number of tons in §B(4) of this regulation.”

“(6) Ozone Season Tonnage Limitations.

Affected Unit	Ozone Season NO <sub>x</sub> Tonnage Limitations Beginning May 1, 2012
Brandon Shores Unit 1	1,124 tons
Brandon Shores Unit 2	1,195 tons

(7) Electric System Reliability During Ozone Seasons.

(a) An exceedance of the NO<sub>x</sub> limitations in §B(4) or (6) of this regulation which occurs because PJM Interconnection, LLC or a successor independent system operator, acts to invoke "Maximum Emergency Generation", "Load Reduction", "Voltage Reduction", "Curtailement of Non-essential Building Load", or "Manual Load Dump" procedures in accordance with the current PJM Manual, or a PJM alert preceding such action as to a generating unit that has temporarily shut down in order to avoid potential interruption in electric service and maintain electric system reliability is not a violation of this chapter provided that:

- (i) Within 36 hours following the action, the owner or operator of the affected electric generating unit or units notifies the Manager of the Air Quality Compliance Program of the action taken by PJM Interconnection and provides the Department with documentation of the action which is satisfactory to the Department;
- (ii) Within 48 hours after completion of the action, the owner or operator of the affected unit or units provides the Department with the estimated NO<sub>x</sub> emissions in excess of the emission limitation; and
- (iii) See *State-only enforceable section of the permit for additional requirement.*

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(b) The owner or operator of an electric generating unit or system, as applicable, shall send written notice to the Manager of the Air Quality Compliance Program not later than 5 business days following the day when the cumulative ozone season NO<sub>x</sub> emissions of an electric generating unit or system, as applicable, are:

(i) Equal to approximately 80 percent of the applicable ozone season emission limitation; and

(ii) Equal to the applicable ozone season emission limitation. “

**COMAR 26.11.27.03E. System-Wide Compliance Determinations.**

“(1) Compliance with the emission limitations in §§B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.

(2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§B and C of this regulation.

(3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.”

**Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. [Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C]

**COMAR 26.11.27.05 – Monitoring and Reporting Requirements**

“A. Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.”

The Permittee shall maintain records sufficient to demonstrate compliance with the requirements of the Healthy Air Act, COMAR 26.11.27. [Reference: COMAR 26.11.01.05A].

**COMAR 26.11.27.05 – Monitoring and Reporting Requirements**

“B. Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.

C. Each report shall include:

(1) Emissions performance results related to compliance with the emission requirements under this chapter;

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- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department.”
- 

#### **4. Acid Rain Provisions**

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

#### **Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].**

The Permittee shall install, certify, operate, and maintain a NO<sub>x</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B-Monitoring Provisions. **[Reference: §75.10(a)(1) and Acid Rain Permit].**

The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75. **[Reference: See Acid Rain Permit]**

The Permittee shall comply with the reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. **[Reference: See the Acid Rain Permit]**

#### **Additional reporting-CPCN 9075**

The Permittee shall submit a report to MDE-ARA to be postmarked by the 30th day following the end of each calendar quarter that summarizes the monthly and consecutive rolling 12-month total emissions of NO<sub>x</sub> separately for each boiler and for total emissions of NO<sub>x</sub> from the Brandon Shores facility.”

**[Reference: CPCN Case No. 9075 Section X. condition 30]**

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#### **5. Cross-State Air Pollution Rule**

**See Table IV-14: CSAPR for requirements.**

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#### **E. Control of CO Emissions**

**PSD-Best Available Control Technology (BACT) for Carbon Monoxide (CO).**

Emissions of CO shall not exceed **0.2 pounds per million Btu (lb./MMBtu)** (3-hour average). This limit shall be achieved by the application of good combustion practices.

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Compliance with this standard will be determined by the average of 3 valid stack test runs using methods approved by the Department.

**[Reference: CPCN Case No. 9075, Section V Condition 17a.]**

**Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the CO continuous emission monitoring system. **[Reference: CPCN Case No. 9075-Section VIII, condition 22, 23 and 24].**

The Permittee shall operate the boilers in accordance the Operations and Maintenance Plan (the Plan). The Plan shall include a description of good combustion practices and methods to be employed to minimize CO emissions and methods used to estimate emissions of CO emissions.

In accordance with the Operations and Maintenance Plan, the Permittee shall continuously monitor CO emissions using a continuous emissions monitor. The Permittee shall perform QC/QA procedures on the CEM system in accordance with facility specific practices and/or those recommended by the CEM manufacturer.

**[Reference: COMAR 26.11.03.06C and CPCN Case No. 9075 – June 4, 2007, Section V condition (17)(c)]**

The Permittee shall maintain a record of the CO CEM readings collected by the data acquisition system. The Permittee shall maintain all records necessary to demonstrate compliance with the Operations and Maintenance Plan, including date of occurrence and duration of any startup, shutdown and malfunctions.

**[Reference: COMAR 26.11.03.06C and CPCN Case No. 9075, Section V condition 17. & Section X condition 29.]**

1. The Permittee shall submit a report to MDE-ARA to be postmarked by the 30th day following the end of each calendar quarter that:

a) Summarizes separately the date, time, and duration of each startup, shutdown, or malfunction that occurred at Brandon Shores Units 1 and 2 and associated pollution control equipment during the prior period for the purposes of complying with BACT and LAER. The report shall include total monthly and consecutive 12-month total hours of startup, shutdown, and malfunction for each unit;

b) Summarizes the monthly and consecutive rolling 12-month total emissions of PM, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, **CO**, VOCs, and SAM separately for each boiler, the material handling operations, and for total emissions of those pollutants from the Brandon Shores facility.

**[Reference: CPCN Case No. 9075, Section X. condition 30]**

2. If additional tests are requested, the Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to test and a notice of intent to test at least 10 days prior to the scheduled test date. The

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Permittee shall submit the results of stack tests in a final report within 60 days from test completion. Analytical data shall be submitted to MDE-ARA directly from the emission testing company.

**[Reference: COMAR 26.11.01.04A]**

3. Unless otherwise instructed by MDE, all air quality notifications and reports required by this CPCN shall be submitted to:

Administrator, Compliance Program  
Air and Radiation Administration  
1800 Washington Boulevard  
Baltimore, Maryland 21230

**[Reference: Case No. 9075, Section X condition 35]**

4. The Permittee shall report to the Department within 30 days after the end of each calendar quarter, any 3-hour block average estimated CO emission values calculated by the DAS in accordance with the O&M Plan that were greater than 0.2 pounds per MMBtu while the unit was burning primary fuel. **[Reference; COMAR 26.11.03.06C]**

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F. Control of VOC Emissions

**Lowest Achievable Emission Rate (LAER) for Volatile Organic Compound (VOC)**

Emissions of VOC shall not exceed **0.0024 lb./MMBtu** per unit (3-hour average). Compliance with this standard will be determined by the average of 3 valid stack test runs using methods approved by the Department.

**[Reference: CPCN Case No. 9075, Section VI Condition 19a.]**

**Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the CO continuous emission monitoring system that is used in conjunction with a data acquisition system in order to continuously monitor VOC emissions.

**[Reference: CPCN Case No. 9075-Section VIII, condition 22, 23 and 24].**

The Permittee shall operate the boilers in accordance the Operations and Maintenance Plan (the Plan). The Plan shall include a description of good combustion practices and methods to be employed to minimize VOC emissions and methods used to estimate VOC emissions during startup, shutdown, and malfunction of the generating units or associated pollution control systems. In accordance with the Operations and Maintenance Plan, the Permittee shall continuously monitor estimated VOC emissions by using a data acquisition system to collect data from the CO CEM and apply a factor of 0.012 VOC/CO in order to calculate VOC emissions for recordkeeping and reporting purposes.

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The Permittee may petition the Department to revise the factor based upon the results of additional compliance stack tests.

**[Reference: COMAR 26.11.03.06C and CPCN Case No. 9075 – Section VI condition (19)(b)]**

The Permittee shall maintain a record of the data collected by the data acquisition system which calculates VOC emissions on a continuous basis. The Permittee shall maintain all records necessary to demonstrate compliance with the Operations and Maintenance Plan, including date of occurrence and duration of any startup, shutdown and malfunctions in the operation of Brandon Shores Units1 and 2 and associated emissions control equipment.

**[Reference: COMAR 26.11.03.06C and CPCN Case No. 9075, Section VI condition 19. & Section X condition 29.]**

See Reporting requirements for CO Emissions above; and  
The Permittee shall report to the Department within 30 days after the end of each calendar quarter, any 3-hour block average estimated VOC emission values calculated by the DAS in accordance with the O&M Plan that were greater than 0.0024 pounds per MMBtu while the unit was burning primary fuel.

**[Reference: COMAR 26.1.03.06C and CPCN Case No. 9075, Section X condition 30 and COMAR 26.11.03.06C]**

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G. Control of HAP Emissions

**See Table IV-13: MACT Subpart UUUUU Requirements.**

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H. Operational Limits

**See Table IV-9b-Boilers Modification.**

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**Emissions Units: FSC-BS-Unit1 and FSC-BS-Unit2 (Cont'd)**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

NSPS Requirements: 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS) - **Note: FSC-BS-Unit1 and Unit2** have particulate matter continuous emissions monitors (PEMS). Subpart



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D allows units that install PEMS to become subject to the PM standards of Subpart Da. Units that comply with the Subpart Da PM standard are exempt from an opacity standard.

Compliance Status

**FSC-BS-Unit2** received an NOV on December 21, 2016 for exceeding the SO<sub>2</sub> NSPS limit of 1.2 lb./MMBtu limit. The exceedance occurred due to an equipment operator failing to open a manual lime slurry makeup isolation valve after a unit maintenance outage. The Permittee resolved the issue by signing a settlement agreement and with the Department and payment of a civil penalty of \$20K.

**Applicable Standards and Limitations:**

A. Control of Visible Emissions

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS)**

**§60.42Da - Standards for particulate matter (PM).**

“(b) Except as provided in paragraphs (b)(1) and (b)(2) of this section, on and after the date the initial PM performance test is completed or required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility shall not cause to be discharged into the atmosphere any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(1) An owner or operator of an affected facility that elects to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart is **exempt** from the opacity standard specified in this paragraph (b) of this section.”

**Compliance Demonstration**

*See Particulate Matter Requirements.*

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B. Control of Particulate Matter Emissions

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS)**

**§60.42 - Standard for particulate matter (PM).**

“(a) Except as provided under paragraphs (b), (c), (d), and (e) of this section, on and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that:

(1) Contain PM in excess of 43 nanograms per joule (ng/J) heat input (0.10 lb./MMBtu) derived from fossil fuel or fossil fuel and wood residue.”

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“(c) As an alternate to meeting the requirements of paragraph (a) of this section, an owner or operator that elects to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions can petition the Administrator (in writing) to comply with §60.42Da(a) of subpart Da of this part. If the Administrator grants the petition, the source will from then on (unless the unit is modified or reconstructed in the future) have to comply with the requirements in §60.42Da(a) of subpart Da of this part.”

**§60.48Da - Compliance provisions.**

“(a) For affected facilities for which construction, modification, or reconstruction commenced before May 4, 2011, the applicable PM emissions limit and opacity standard under §60.42Da, SO<sub>2</sub> emissions limit under §60.43Da, and NO<sub>x</sub> emissions limit under §60.44Da apply at all times except during periods of startup, shutdown, or malfunction.....”

**§60.42Da - Standards for particulate matter (PM).**

“(a) Except as provided in paragraph (f) of this section, on and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility shall not cause to be discharged into the atmosphere from any affected facility for which construction, reconstruction, or modification commenced before March 1, 2005, any gases that contain PM in excess of 13 ng/J (0.03 lb./MMBtu) heat input.”

**Compliance Demonstration**

**§60.49Da - Emission monitoring.**

“(v) The owner or operator of an affected facility using a CEMS measuring PM emissions to meet requirements of this subpart shall install, certify, operate, and maintain the CEMS as specified in paragraphs (v)(1) through (v)(4) of this section.

(1) The owner or operator shall conduct a performance evaluation of the CEMS according to the applicable requirements of §60.13, Performance Specification 11 in appendix B of this part, and procedure 2 in appendix F of this part.

(2) During each PM correlation testing run of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O<sub>2</sub> (or CO<sub>2</sub>) data shall be collected concurrently (or within a 30- to 60-minute period) by both the CEMS and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall be used; and

(ii) For O<sub>2</sub> (or CO<sub>2</sub>), Method 3A or 3B of appendix A-2 of this part, as applicable shall be used.

(3) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative

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Response Audit's must be performed annually, and Response Correlation Audits must be performed every 3 years.

(4) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in §60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (*i.e.*, reference method) data and performance test (*i.e.*, compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see [http://www.epa.gov/ttn/chief/ert/ert\\_tool.html](http://www.epa.gov/ttn/chief/ert/ert_tool.html)) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFire database.”

“(s) The owner or operator shall prepare and submit to the Administrator for approval a unit-specific monitoring plan for each monitoring system, at least 45 days before commencing certification testing of the monitoring systems. The owner or operator shall comply with the requirements in your plan. The plan must address the requirements in paragraphs (s)(1) through (6) of this section.

(1) Installation of the CEMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of the exhaust emissions (e.g., on or downstream of the last control device);

(2) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems.

(3) Performance evaluation procedures and acceptance criteria (e.g., calibrations, relative accuracy test audits (RATA), etc.);

(4) Ongoing operation and maintenance procedures in accordance with the general requirements of §60.13(d) or part 75 of this chapter (as applicable);

(5) Ongoing data quality assurance procedures in accordance with the general requirements of §60.13 or part 75 of this chapter (as applicable); and

(6) Ongoing recordkeeping and reporting procedures in accordance with the requirements of this subpart.”

**§60.7- Notification and record keeping**

“(f) Any owner or operator subject to the provisions of this part shall 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.”

**§60.45 - Emissions and fuel monitoring.**

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“(g) Excess emission and monitoring system performance reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in §60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

(4) *Particulate matter*. Excess emissions for affected facilities using a CEMS for measuring PM are defined as any boiler operating day period during which the average emissions (arithmetic average of all operating one-hour periods) exceed the applicable standards in §60.42. **Affected facilities using PM CEMS must follow the most current applicable compliance and monitoring provisions in §§60.48Da and 60.49Da of subpart Da of this part.**”

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C. Control of Sulfur Oxides Emissions

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS)**

**§60.43 - Standard for sulfur dioxide (SO<sub>2</sub>).**

“(a) Except as provided under paragraph (d) of this section, on and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that contain SO<sub>2</sub> in excess of:

(1) 340 ng/J heat input (0.80 lb./MMBtu) derived from liquid fossil fuel or liquid fossil fuel and wood residue.

(2) 520 ng/J heat input (1.2 lb./MMBtu) derived from solid fossil fuel or solid fossil fuel and wood residue, except as provided in paragraph (e) of this section.”

“(c) Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels.

**Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. [Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].

**§60.45 - Emissions and fuel monitoring**

(a) “Each owner or operator of an affected facility subject to the applicable emissions standard shall install, calibrate, maintain, and operate continuous opacity monitoring system (COMS) for measuring opacity and a continuous emissions monitoring system (CEMS) for **measuring SO<sub>2</sub> emissions**, NO<sub>x</sub> emissions, and either oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) except as provided in paragraph (b) of this section.”

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**§60.7- Notification and record keeping**

“(f) Any owner or operator subject to the provisions of this part shall 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.”

**§60.45 - Emissions and fuel monitoring.**

“(g) Excess emission and monitoring system performance reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in §60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

(2) *Sulfur dioxide*. Excess emissions for affected facilities are defined as:

(i) For affected facilities electing not to comply with §60.43(d), any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of SO<sub>2</sub> as measured by a CEMS exceed the applicable standard in §60.43; or

(ii) For affected facilities electing to comply with §60.43(d), any 30 operating day period during which the average emissions (arithmetic average of all one-hour periods during the 30 operating days) of SO<sub>2</sub> as measured by a CEMS exceed the applicable standard in §60.43. Facilities complying with the 30-day SO<sub>2</sub> standard shall use the most current associated SO<sub>2</sub> compliance and monitoring requirements in §§60.48Da and 60.49Da of subpart Da of this part or §§60.45b and 60.47b of subpart Db of this part, as applicable.”

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**D. Control of Nitrogen Oxides Emissions**

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS)**

**§60.44 - Standard for nitrogen oxides (NO<sub>x</sub>).**

“(a) Except as provided under paragraph (e) of this section, on and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that contain NO<sub>x</sub>, expressed as NO<sub>2</sub> in excess of:

(2) 129 ng/J heat input (0.30 lb./MMBtu) derived from liquid fossil fuel, liquid fossil fuel and wood residue, or gaseous fossil fuel and wood residue.

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(3) 300 ng/J heat input (0.70 lb./MMBtu) derived from solid fossil fuel or solid fossil fuel and wood residue (except lignite or a solid fossil fuel containing 25 percent, by weight, or more of coal refuse).”

**Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. [Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].

**§60.45 - Emissions and fuel monitoring**

(a) “Each owner or operator of an affected facility subject to the applicable emissions standard shall install, calibrate, maintain, and operate continuous opacity monitoring system (COMS) for measuring opacity and a continuous emissions monitoring system (CEMS) for **measuring** SO<sub>2</sub> emissions, **NO<sub>x</sub> emissions**, and either oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) except as provided in paragraph (b) of this section.”

**§60.7- Notification and record keeping**

“(f) Any owner or operator subject to the provisions of this part shall 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.”

**§60.45 - Emissions and fuel monitoring.**

“(g) Excess emission and monitoring system performance reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in §60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

(3) *Nitrogen oxides*. Excess emissions for affected facilities using a CEMS for measuring NO<sub>x</sub> are defined as:

- (i) For affected facilities electing not to comply with §60.44(e), any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards in §60.44; or
- (ii) For affected facilities electing to comply with §60.44(e), any 30 operating day period during which the average emissions (arithmetic average of all one-hour periods during the 30 operating days) of NO<sub>x</sub> as measured by a CEMS exceed the applicable standard in §60.44. Facilities complying with the 30-day NO<sub>x</sub> standard shall use the most current associated NO<sub>x</sub> compliance and monitoring requirements in §§60.48Da and 60.49Da of subpart Da of this part.”

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**Emissions Units: FSC-BS-AuxBlr1 and FSC-BS-AuxBlr2**

**FSC-BS-AuxBlr1 and FSC-BS-AuxBlr2:** Two (2) No. 2 oil-fired Auxiliary Boilers used for supplying steam to Brandon Shores Station. [MDE Reg. Nos. 4-0507 & 4-0508]. *FSC-BS-AuxBlr1 received permit to construct in 2022 to add natural gas firing capability; modification expected to be completed by Dec 31,2025.*

These boilers were installed in 1973 prior to NSPS (subpart Db) standards for boilers of this size.

**40 CFR Part 60, Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units** - *The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr.))*

**Compliance Status**

These boilers are operated if both Brandon Shores Units are down, and auxiliary steam is needed. Some equipment needs steam to operate (for example there are some steam powered pumps), so steam must be available to start up a unit.

During the October 8, 2019 Compliance Evaluation of the Brandon Shores: **FSC-BS-AuxBlr1** operated 2.4 hours in 2018. Tune-up was performed in 2016. The capacity factor are as follows: 0.0002% in 2017 and 0.001% in 2018.

**FSC-BS-AuxBlr2** is retired in place. It has not been used in over 5 years.

**Applicable Standards and Limitations:**

A. **Control of Visible Emissions**

**COMAR 26.11.09.05A(2) – Fuel Burning Equipment**

“Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.”

**COMAR 26.11.09.05A(3) - Exceptions.** “Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:

(a) The visible emissions are not greater than 40 percent opacity; and  
The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.”

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**Compliance Demonstration**

The Permittee shall verify that there are no visible emissions when burning No. 2 fuel oil. An observer shall perform an EPA Reference Method 9 observation of stack emissions for 18-minute period once every 168 block hours of operation on oil or at a minimum once per year. This requirement is waived if the total hours of operation of a boiler are less than 100 hours in any calendar year.

The Permittee shall perform the following, if emissions are visible to human observer:

- (a) inspect combustion control system and boiler operations,
- (b) perform all necessary adjustments and/or repairs to the boiler within 48 hours of operation so that visible emissions are eliminated; and
- (c) document in writing the results of inspections, adjustments and/or repairs to the auxiliary boiler.

The Permittee shall after 48 hours of operation, if the required adjustments and/or repairs had not eliminated the visible emissions, perform a Method 9 observation once daily when the boiler is operating on No.2 fuel oil for an 18-minute period until corrective action have eliminated visible emissions.

The Permittee shall maintain records of all visible emissions observations for a period of at least 5 years. The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, Plant Wide Condition, "Report of Excess Emissions and Deviations" [**Reference: COMAR 26.11.03.06C**]

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**B. Control of Sulfur Oxides Emissions**

**COMAR 26.11.09.07: Control of Sulfur Oxides from Fuel Burning Equipment.**

"**A. Sulfur Content Limitations for Fuel.** A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:

**(2) In Areas III and IV:**

(a) All solid fuels, 1.0 percent;

**(b) Distillate fuel oils, 0.3 percent;**

(c) Residual fuel oils, 1.0 percent."

**C. Request for Analyses.** Any person offering to sell or deliver fuel or any person responsible for equipment in which fuel or process gas is burned, upon request, shall submit to the Department or control officer such analyses of fuel or process gas as may be required to determine compliance with this regulation."

**Compliance Demonstration**

The Permittee shall obtain fuel supplier certification which verify that the fuel oil is in compliance with the sulfur content in the fuel oil limitation or obtain sulfur in



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fuel analyses of oil that is representative of the oil burned. **[Reference: COMAR 26.11.03.06C].**

The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with the sulfur content in the fuel limitation or the sulfur in fuel analyses must be maintained for at least 5 years. The Permittee shall submit fuel supplier certification report or fuel analyses if requested by the Department. **[Reference: COMAR 26.11.09.07C].**

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C. Control of Nitrogen Oxides Emissions

**COMAR 26.11.09.08G** – Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 percent or less and Combustion Turbines with a Capacity Factor Greater than 15 percent. “A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

- (a) Provide certification of the capacity factor of the equipment to the Department in writing;
- (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
- (c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;
- (d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
- (e) Maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request.”

**Compliance Demonstration**

The Permittee shall perform a combustion analysis and optimize combustion at least once annually for any of the auxiliary boiler that operates more than 500 hours during a calendar year. **[Reference: COMAR 26.11.09.08G(1)(b)]**

The Permittee shall calculate the capacity factor of the auxiliary boilers for each calendar year within 30 days after the end of each year. **[Reference: COMAR 26.11.03.06C].**

The Permittee shall maintain the following on site and make available to the Department upon request:

- Records of the calculated capacity factors.
- Records of hours of operation.
- Records of the results of the combustion analyses performed if the hours of operation exceed 500.

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- Record of training program attendance for each operator.

**[Reference: COMAR 26.11.02.19C(1)(b), COMAR 26.11.03.06C, COMAR 26.11.09.08G(1)(c), & COMAR 26.11.09.08G(1)(e)].**

The Permittee shall provide certification of the capacity factor of the equipment to the Department with support documentation in Annual Emissions certification Report. **[Reference: COMAR 26.11.03.06C & COMAR 26.11.09.08G(1)(a)].**

The Permittee shall submit a list of trained operators to the Department upon request. **[Reference: COMAR 26.11.09.08G(1)(e) and COMAR 26.11.03.06C].**

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**D. Control of HAPs Emissions:**

**See Table IV-2a-Boiler MACT Subpart DDDDD.**

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**E. Operational Limits**

**See Table IV-9b-Boilers Modification.**

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**Emissions Units: FSC-BS-AuxBlr1 and FSC-BS-AuxBlr2 (Cont'd)**

**FSC-BS-AuxBlr1 and FSC-BS-AuxBlr2:** Two (2) No. 2 oil-fired Auxiliary Boilers used for supplying steam to Brandon Shores Station. **[MDE Reg. Nos. 4-0507 & 4-0508]**

*FSC-BS-AuxBlr1 received permit to construct in 2022 to add natural gas firing capability; modification expected to be completed by Dec 31,2025.*

***Boiler MACT-Subpart DDDDD***

These boilers shall meet the definition of “Limited–use boiler” under 40 CFR Part 63, Subpart DDDDD.

**Compliance Status**

During the October 8, 2019 Compliance Evaluation of the Brandon Shores, the Permittee’s Initial notification dated March 7, 2015 and Notification of Compliance status dated October 16, 2016.

**Applicable Standards and Limitations:**

**Control of HAPs Emissions**

**40 CFR Part 63, Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters**

**§63.7485 - Am I subject to this subpart?**

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You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of HAP, except as specified in §63.7491. For purposes of this subpart, a major source of HAP is as defined in §63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in §63.7575.

**§63.7495** - When do I have to comply with this subpart?

“(b) If you have an **existing boiler** or process heater, you must comply with this subpart no later than **January 31, 2016**, except as provided in §63.6(i).”

“(d) You must meet the notification requirements in §63.7545 according to the schedule in §63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.”

**§63.7500** - What emission limitations, work practice standards, and operating limits must I meet?

“(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.”

“(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in §63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.”

**Limited-use boiler** or **process heater** means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable average annual capacity factor of no more than 10 percent. **[Reference: §63.7575]**

Operational Limit

In order to meet the definition of a “Limited–use boiler” under 40 CFR Part 63, Subpart DDDDD, the Permittee shall limit the annual capacity factor, as defined in §63.7575, for **FSC-BS-AuxBlr1** and **FSC-BS-AuxBlr2** to no more than 10 percent.

**Compliance Demonstration**

**§63.7510** - What are my initial compliance requirements and by what date must I conduct them?

“(e) For existing affected sources (as defined in §63.7490), you must complete the initial compliance demonstration, as specified in paragraphs (a) through (d) of

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this section, no later than 180 days after the compliance date that is specified for your source in §63.7495 and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in §63.7540(a)(10)(i) through (vi) no later than the compliance date specified in §63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in §63.7495.

**Note:** Limited use boilers are exempt from the energy assessment requirement.

**§63.7515 - When must I conduct subsequent performance tests, fuel analyses, or tune-ups?**

“(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to §63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in §63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in §63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in §63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in §63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after the initial startup of the new or reconstructed affected source.”

**§63.7530 - How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?**

“(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.7545(e).”

**Continuous Compliance Requirements**

**§63.7540 - How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?**

“(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 13 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.”

“(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12

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months prior to the tune-up. **This frequency does not apply to limited-use boilers** and process heaters, as defined in §63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO<sub>x</sub> requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.”

**§63.7555 - What records must I keep?**

“(a) You must keep records according to paragraphs (a)(1) and (2) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or

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Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in §63.10(b)(2)(viii).

(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.”

**§63.7560 - In what form and how long must I keep my records?**

“(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years.”

**§63.7545 - What notifications must I submit and when?**

“(a) You must submit to the Administrator all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

“(e) If you are required to conduct an initial compliance demonstration as specified in §63.7530, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8), as applicable. If you are not required to conduct an initial compliance demonstration as specified in §63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) and must be submitted within 60 days of the compliance date specified at §63.7495(b).”

“(8) In addition to the information required in §63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) “This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR part 63 subpart DDDDD at this site according to the procedures in §63.7540(a)(10)(i) through (vi).”

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**§63.7550 - What reports must I submit and when?**

“(a) You must submit each report in Table 9 to this subpart that applies to you.

You must submit a(n)	The report must contain	You must submit the report
1. Compliance report	a. Information required in §63.7550(c)(1) through (5); and	Semiannually, annually, biennially, or every 5 years according to the requirements in §63.7550(b).

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section.

**For units that are subject only to a requirement to conduct an annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.**

(1) The first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in §63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in §63.7495.

(2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in §63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. **Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.**

(4) Each subsequent compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. **Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.**

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(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to the requirements of a tune up, they must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of this section, (xiv) and (xvii) of this section, and paragraph (c) (5)(iv) of this section for limited-use boiler or process heater.

“(5)(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) The total operating time during the reporting period.”

“(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, **or 5-year tune-up** according to §63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.”

“(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.”

“(3) You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA’s CDX). You must use the appropriate electronic report in CEDRI for this subpart.

Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.”

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**Emissions Units: FSC-BS-MH**

The Brandon Shores material handling system consists of various equipment and processes to transport coal, fly ash, hydrated lime or equivalent, powdered activated carbon and other materials. There are facilities to mix coal with additives to reduce stack emissions. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment. **[MDE Reg. No.6-1143]**

**Compliance Status:**

On May 17, 2021, Permittee conducted VE observations (Method 9 evaluations) for the three coal conveyors subject to the requirements of 40 CFR §60.258(d). Per the requirements, test was completed within 12 months of the date of the last performance test was required to be completed. During the October 8, 2019, Compliance Evaluation of the Brandon Shores,



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deviations are reported in the SIXMON reports as required. Monthly VE observations are performed on the coal conveyors and report sent to EPA via mail on a semi-annual basis.

**Applicable Standards and Limitations:**

**A. Control of Visible Emissions**

**COMAR 26.11.06.02C. - Visible Emission Standards.**

“(2) In Areas III and IV a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.”

**COMAR 26.11.06.02A(2)** “The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications or adjustments, or occasional cleaning of control equipment, if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period.”

**Note:** *The VE limit applies only to confined sources which include coal and fly ash storage silos.*

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**Compliance Demonstration**

The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMP) Plan that will be used to prevent particulate matter from becoming airborne.

The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the limestone and gypsum handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material.

The Permittee shall keep the results of the monthly inspections for a period of five (5) years.

The Permittee shall maintain the written reasonable precautions (BMP) at the facility and make it available to the Department upon request.

The Permittee shall report the results of the inspections and/or testing and provide a copy of the current BMP plan upon request by the Department.

**[Reference: COMAR 26.11.03.06C]**

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**B. Control of Particulate Matter Emissions**

**1. COMAR 26.11.06.03B. - Particulate Matter from Confined Sources.**

“(2) Areas III and IV. (a) A person may not cause or permit to be discharged into the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD (68.7 mg/dscm).”

**2. COMAR 26.11.06.03 C - Particulate Matter from Unconfined Sources.**

(1) A person may not cause or permit emissions from an unconfined source without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, when appropriate as determined by the Department, the installation and use of hoods, fans, and dust collectors to enclose, capture, and vent emissions. In making this determination, the Department shall consider technological feasibility, practicality, economic impact, and the environmental consequences of the decision.

**3. COMAR 26.11.06.03D - Particulate Matter from Materials Handling and Construction.**

A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

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**Compliance Demonstration**

The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMP) Plan that will be used to prevent particulate matter from becoming airborne.

The Permittee shall update Brandon Shores Best Management Practices (BMP) Plan, as required by the initial Part 70 permit for this facility when a revision is needed to ensure that reasonable precautions will be used to prevent particulate matter from this equipment from becoming airborne and that adequate inspection will be conducted and documented. The BMP shall include provisions for routine inspections of emission sources and controls, corrective measures, and recordkeeping for such.

The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the limestone and gypsum handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material. The Permittee shall keep the results of the monthly inspections for a period of five (5) years.

The Permittee shall maintain the written reasonable precautions (BMP) at the facility and make it available to the Department upon request.

The Permittee shall report the results of the inspections and/or testing and provide a copy of the current BMP plan upon request by the Department.

**[Reference: COMAR 26.11.03.06C]**

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**C. 40 CFR Part 60, Subpart Y—Standards of Performance for Coal Preparation and Processing Plants**

**§60.254 - Standards for coal processing and conveying equipment, coal storage systems, transfer and loading systems, and open storage piles.**

“(b) On and after the date on which the performance test is conducted or required to be completed under §60.8, whichever date comes first, an owner or operator of any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified after April 28, 2008, must meet the requirements in paragraphs (b)(1) through (3) of this section, as applicable to the affected facility.

(1) Except as provided in paragraph (b)(3) of this section, the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit 10 percent opacity or greater.

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(2) The owner or operator must not cause to be discharged into the atmosphere from any mechanical vent on an affected facility gases which contain particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf).

(3) Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of paragraph (b)(1) of this section.”

**Note:** *This limit only applies to the four (4) new coal conveyors that transport coal to and from the new additive mixing facility.*

**Compliance Demonstration**

**§60.255 - Performance tests and other compliance requirements.**

“(b) An owner or operator of each affected facility that commenced construction, reconstruction, or modification after April 28, 2008, must conduct performance tests according to the requirements of §60.8 and the methods identified in §60.257 to demonstrate compliance with the applicable emissions standards in this subpart as specified in paragraphs (b)(1) and (2) of this section.

(2) For each affected facility subject to an opacity standard, an initial performance test must be performed. Thereafter, a new performance test must be conducted according to the requirements in paragraphs (b)(2)(i) through (iii) of this section, as applicable, except as provided for in paragraphs (e) and (f) of this section. Performance test and other compliance requirements for coal truck dump operations are specified in paragraph (h) of this section.

(i) If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test must be conducted within 90 operating days of the date that the previous performance test was required to be completed.

(ii) If all 6-minute average opacity readings in the most recent performance test are equal to or less than half the applicable opacity limit, a new performance test must be conducted within 12 calendar months of the date that the previous performance test was required to be completed.

(iii) An owner or operator of an affected facility continuously monitoring scrubber parameters as specified in §60.256(b)(2) is exempt from the requirements in paragraphs (b)(2)(i) and (ii) if opacity performance tests are conducted concurrently with (or within a 60-minute period of) PM performance tests.”

“(c) If any affected coal processing and conveying equipment (e.g., breakers, crushers, screens, conveying systems), coal storage systems, or coal transfer and loading systems that commenced construction, reconstruction, or modification after April 28, 2008, are enclosed in a building, and emissions from the building do not exceed any of the standards in §60.254 that apply to the affected facility, then the facility shall be deemed to be in compliance with such standards.”

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**§60.258 - Reporting and Recordkeeping.**

“(a) The owner or operator of a coal preparation and processing plant that commenced construction, reconstruction, or modification after April 28, 2008, shall maintain in a logbook (written or electronic) on-site and make it available upon request. The logbook shall record the following:

(1) The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from manufacturer recommendation, if any, shall be noted.

(2) The date and time of periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted.

(3) The amount and type of coal processed each calendar month.

(4) The amount of chemical stabilizer or water purchased for use in the coal preparation and processing plant.

(5) Monthly certification that the dust suppressant systems were operational when any coal was processed and that manufacturer's recommendations were followed for all control systems. Any variance from the manufacturer's recommendations, if any, shall be noted.

(6) Monthly certification that the fugitive coal dust emissions control plan was implemented as described. Any variance from the plan, if any, shall be noted. A copy of the applicable fugitive coal dust emissions control plan and any letters from the Administrator providing approval of any alternative control measures shall be maintained with the logbook. Any actions, e.g., objections, to the plan and any actions relative to the alternative control measures, e.g., approvals, shall be noted in the logbook as well.

“(b) For the purpose of reports required under section 60.7(c), any owner operator subject to the provisions of this subpart also shall report semiannually periods of excess emissions as follow:

(3) All 6-minute average opacities that exceed the applicable standard.”

“(d) After July 1, 2011, within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with this subpart, the owner or operator of the affected facility must submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE data base available at <http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main>. For performance tests that cannot be entered into WebFIRE (*i.e.*, Method 9 of appendix A-4 of this part opacity performance tests) the owner or operator of the affected facility must mail a summary copy to United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; mail code: D243-01; RTP, NC 27711.”

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**Emissions Units: FSC-BS-LSH and FSC-BS-GH**

**FSC-BS-LSH:** The Brandon Shores limestone handling system consists of various equipment and processes to handle limestone. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment. **[MDE Reg. No. 6-1149]**

**FSC-BS-GH:** The Brandon Shores gypsum handling system consists of various equipment and processes to handle gypsum. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment. **[MDE Reg. No. 6-1150]**

**Compliance Status**

During the October 8, 2019, Compliance Evaluation of the Brandon Shores, the wet suppression system is no longer in service. The facility no longer received barges of limestone and the wet suppression system was part of the crane that unloaded barges. The limestone is now delivered by trucks, the back end of the truck is in the dome offloading. Monthly VE observations are performed, and reports sent to EPA via the mail.

**Applicable Standards and Limitations:**

**Control of Particulate Matter Emissions**

**1. COMAR 26.11.06.03C - Particulate Matter from Unconfined Sources.**

(1) A person may not cause or permit emissions from an unconfined source without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, when appropriate as determined by the Department, the installation and use of hoods, fans, and dust collectors to enclose, capture, and vent emissions. In making this determination, the Department shall consider technological feasibility, practicality, economic impact, and the environmental consequences of the decision.

**2. COMAR 26.11.06.03D - Particulate Matter from Materials Handling and Construction.**

A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

**Compliance Demonstration**

**1 & 2 COMAR:** The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMP) Plan that will be used to prevent particulate matter from becoming airborne.

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The Permittee shall update Brandon Shores Best Management Practices (BMP) Plan, as required by the initial Part 70 permit for this facility when a revision is needed to ensure that reasonable precautions will be used to prevent particulate matter from this equipment from becoming airborne and that adequate inspection will be conducted and documented. The BMP shall include provisions for routine inspections of emission sources and controls, corrective measures, and recordkeeping for such.

The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the limestone and gypsum handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material.

The Permittee shall keep the results of the monthly inspections for a period of five (5) years.

The Permittee shall maintain the written reasonable precautions (BMP) at the facility and make it available to the Department upon request.

The Permittee shall report the results of the inspections and/or testing and provide a copy of the current BMP plan upon request by the Department.

**[Reference: COMAR 26.11.03.06C]**

**For FSC-BS-LSH only**

**3. 40 CFR Part 60, Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants**

**§60.672 - Standard for particulate matter (PM).**

“(b) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.”

**Table 3 to Subpart OOO of Part 60—Fugitive Emission Limits**

	<b>The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or</b>	<b>The owner or operator must meet the following fugitive emissions limit for crushers at which a capture</b>	<b>The owner or operator must demonstrate compliance with these limits by conducting</b>
<b>For</b>			

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	<b>railcar loading stations or from any other affected facility (as defined in §§60.670 and 60.671)</b>	<b>system is not used</b>	
Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	10 percent opacity	15 percent opacity	An initial performance test according to §60.11 of this part and §60.675 of this subpart.

“(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a) and (b) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:  
(1) Fugitive emissions from the building openings (except for vents as defined in §60.671) must not exceed 7 percent opacity; and  
(2) Vents (as defined in §60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of this subpart.”

**Table 2 to Subpart 000 of Part 60—Stack Emission Limits for Affected Facilities with Capture Systems**

<b>For</b>	<b>The owner or operator must meet a PM limit of</b>	<b>And the owner or operator must meet an opacity limit of</b>	<b>The owner or operator must demonstrate compliance with these limits by conducting</b>
Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	0.05 g/dscm (0.022 gr/dscf) <sup>a</sup>	7 percent for dry control devices <sup>b</sup>	An initial performance test according to §60.8 of this part and §60.675 of this subpart; 676(c), (d), and (e).

**Compliance Demonstration**

**§60.675 - Test methods and procedures.**

“(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendices A-1 through A-7 of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.”

**§60.674 - Monitoring of operations.**



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“(b) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b).

(1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:

(i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and §60.676(b), and

(ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under §60.11 of this part and §60.675 of this subpart.

(2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under §60.676(b) must specify the control mechanism being used instead of the water sprays.”

**§60.676 - Reporting and recordkeeping.**

“(b)(1) Owners or operators of affected facilities (as defined in §§60.670 and 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under §60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.”

“(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A-4) to demonstrate compliance with §60.672(b), (e) and (f).”

All notifications and reports required by applicable subparts of 40 CFR 60 unless specified otherwise shall be submitted to:

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Administrator, Compliance Program  
Air and Radiation Administration  
1800 Washington Boulevard  
Baltimore, MD 21230

and

United States Environmental Protection Agency  
Region III, Enforcement & Compliance Assurance Division  
Air, RCRA and Toxics Branch (3ED21)  
Four Penn Center  
1600 John F. Kennedy Boulevard  
Philadelphia, PA 19103-2852

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**Emissions Units: FSC-BS-QP**

**FSC-BS-QP:** The Quench Pumps are two (2) 500 HP diesel-fired internal combustion engines that are used to supply water to the flue gas desulfurization (FGD) system in case of emergencies. **[MDE Reg. No. 9-0988]**

**Compliance Status**

The purpose of the quench pumps is to quickly cool down the scrubbers in the event of a high temperature excursion. This will prevent damage to the scrubber. These pumps are driven by diesel generators. During the October 8, 2019, Compliance Evaluation of the Brandon Shores:

Operating hours are as follows:

2017: #1 engine – 17.8 hours; #2 engine – 20.4 hours

2018: #1 engine – 24.0 hours; #2 engine – 21.9 hours

Capacity factors for the pumps are:

2017: #1 pump – 0.2% and #2 pump – 0.23%.

2018: #1 pump – 0.27% and #2 pump – 0.25%.

**Applicable Standards and Limitations:**

**A. Control of Visible Emissions**

**1. COMAR 26.11.09.05E(2), Emission During Idle Mode.** “A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.” This requirement is not applicable during Preventative Maintenance.

**COMAR 26.11.09.05E(3), Emission During Operating Mode.** “A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.” This requirement is not applicable during Preventative Maintenance.

**Exceptions. COMAR 26.11.09.05E(4)**

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- “(a) Section E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 minutes for the purpose of clearing exhaust system.  
(b) Section E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:  
(i) Engines that are idled continuously when not in service: 30 minutes;  
(ii) All other engines: 15 minutes.  
(c) Section E(2) and E(3) does not apply while maintenance, repair, or testing is being performed by qualified mechanics.”

**Compliance Demonstration**

The Permittee shall properly operate and maintain the engines in a manner to minimize visible emissions. The Permittee shall retain records of preventative maintenance that relate to combustion performance on site for at least 5 years and make these records available to the Department upon request. The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, “Report of Excess Emissions and Deviations.”

**[Reference: COMAR 26.11.03.06C]**

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**2. 40 CFR Part 60 Subpart IIII - Standards of Performance (NSPS) for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE).**

**§89.113 - Smoke emission standard.**

(a) Exhaust opacity from compression- ignition non-road engines for which this subpart is applicable must not exceed:

- (1) 20 percent during the acceleration mode;
- (2) 15 percent during the lugging mode; and
- (3) 50 percent during the peaks in either the acceleration or lugging modes.

**Compliance Demonstration**

The Permittee must operate and maintain the stationary CI internal combustion engine according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. **[Reference: §60.4211(a)]**

The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, “Report of Excess Emissions and Deviations.”

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**B. Control of Particulate Matter Emissions**

NSPS Subpart IIII

**§60.4205b - What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?**

“(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new non-road CI engines in **§60.4202**, for all pollutants,

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for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.”.

**Compliance Demonstration**

See Operational Limitations in Section 5.4H.

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**C. Control of Sulfur Oxides Emissions**

**COMAR 26.11.09.07A(2) – Control of Sulfur Oxides from fuel burning equipment.** “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV:

- (a) All solid fuels, 1.0 percent;
- (b) **Distillate fuel oils, 0.3 percent;**
- (c) Residual fuel oils, 1.0 percent. “

**Compliance Demonstration**

The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil is in compliance with the limitation on the sulfur content of the fuel oil or obtain sulfur in fuel analyses of oil that is representative of the oil burned.

**[Reference: COMAR 26.11.03.06C]**

The Permittee shall report fuel supplier certification or a copy of the sulfur in fuel analyses to the Department upon request.

**[Reference: COMAR 26.11.09.07C]**

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**§60.4207 - What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?**

**“(a)** Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

**(b)** Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for non-road diesel fuel.”

**Compliance Demonstration**

Comply with Tier III requirements.

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**D. Control of Nitrogen Oxides Emissions**

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**COMAR 26.11.09.08G – Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 percent or less and Combustion Turbines with a Capacity Factor Greater than 15 percent.**

- (1) “A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:
  - (a) Provide certification of the capacity factor of the equipment to the Department in writing;
  - (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
  - (c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;
  - (d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
  - (e) Maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request.”

**Compliance Demonstration**

The Permittee shall perform a combustion analysis and optimize combustion at least once annually when the hours of operation exceed 500 during the year.

**[Reference: COMAR 26.11.09.08G(1)(b)]**

The Permittee shall calculate the capacity factor of the engines for each calendar year within 30 days after the end of each year.

**[Reference: COMAR 26.11.03.06C]**

The Permittee shall maintain:

- (1) Records of the calculated capacity factors. **[Reference: COMAR 26.11.03.06C]**
- (2) Records of hour of operation. **[Reference: COMAR 26.11.02.19.C(1)(b)]**
- (3) Records of combustion analysis performed if the hours of operation exceed 500. **[Reference: COMAR 26.11.09.08G(1)(c)]**
- (4) Record of training program attendance for each operator.

**[Reference: COMAR 26.11.09.08G(1)(e)]**

The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report.

**[Reference: COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C]**

The Permittee shall submit a record of training program attendance for each operator to the Department upon request.

**[Reference: COMAR 26.11.09.08G(1)(e)]**

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**NSPS Subpart IIII**

**§60.4205b** - What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

“(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new non-road CI engines in **§60.4202**, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.”.

**Compliance Demonstration**

The Permittee must operate and maintain the stationary CI internal combustion engine according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. **[Reference: §60.4211(a)]**

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**E. Control of VOC Emissions**

“To meet LAER for the two nominal 500-horsepower diesel-fired quench pumps, the Permittee shall install units designed so the emissions of volatile organic compounds (VOCs) from each of the two units shall not exceed the Tier III limits (2008) standards in g/hp-hr.” **[Reference: CPCN 9075 Section VI condition 20]**

**Compliance Demonstration**

Comply with Tier III requirements.

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**F. Control of Carbon Monoxide Emissions**

**1 BACT Requirement**

“To meet the BACT for CO from the two nominal 500-horsepower diesel-fired quench pumps, the Permittee shall install engines designed so that emissions of carbon monoxide (CO) from each of the two units shall not exceed the Tier III limits (2008) standards in grams per horsepower-hour (G/hp-hr).” **[Reference: CPCN 9075 Section V condition 17c]**

**Compliance Demonstration**

Comply with Tier III requirements.

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**2 NSPS Subpart IIII**

**§60.4205b** What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

“(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the

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emission standards for new non-road CI engines in **§60.4202**, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.”.

**Compliance Demonstration**

Comply with Tier III requirements.

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**G. Control of Hazardous Air Pollutants (HAPS) Emissions**

**40CFR 63 Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**“§63.6590 - What parts of my plant does this subpart cover?**

This subpart applies to each affected source.

(c) Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of **40 CFR part 60 subpart IIII**, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. *No further requirements apply for such engines under this part.*

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.”

**Compliance Demonstration**

Comply with NSPS Subpart IIII requirements

**[Reference: §63.6590(c)]**

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**H. NSPS subpart IIII Operational limitations**

**§60.4209(a) - What are the monitoring requirements if I am an owner or operator of a stationary combustion engine?**

“(a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.”

**§60.4206 - How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?**

“Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and **60.4205** according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.”

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**§60.4211(a) and (e) - What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?**

“(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.”

“(e) Owners or operators may operate the stationary CI ICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing shall be limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local government standards require maintenance and testing of emergency ICE beyond 100 hours per year. Any operation other than emergency operation, and maintenance and testing, is prohibited.

**Compliance Demonstration**

(1) The Permittee shall maintain a log for the emergency generator indicating the amounts of fuel oil combusted or the hours of operation, and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.).

(2) The Permittee shall maintain on site for the life of the source the following records for the emergency diesel generator(s):

(a) Documentation of the manufacture date of the diesel engine, if manufactured prior to April 1, 2006 and the manufacturer model year of the diesel engine;

(b) The installation date of each emergency diesel generator; and

(c) The certifications of compliance or manufacturer engine test data required by 40 CFR §60.4211 and §60.4214(b)

(3) Beginning October 1, 2007, for any NSPS emergency diesel generator the Permittee shall for each fuel delivery obtain from the fuel supplier a fuel supplier certification consisting of the name of the oil supplier, the date of delivery, the amount of fuel delivered, and a statement from the fuel supplier that the diesel fuel oil complies with the specifications of 40 CFR §80.510. The Permittee shall maintain the required records on site for at least five (5) years.

The Permittee shall report the amounts of fuel oil combusted or the hours of operation, and reason for generator operation (i.e., maintenance or operational



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testing, power outage, etc.) to the Department in the annual emission certification report due on April 1 of each year. **[Reference: COMAR 26.11.03.06C]**

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**Emissions Units: FSC-BS-EG**

**FSC-BS-EG:** The emergency generator is a 670 HP diesel-fired internal combustion engine installed at the facility to provide back-up power.

**Compliance Status:**

During the October 8, 2019 Compliance Evaluation of the Brandon Shores: Capacity factors are as follows: 2017 – 0.14% and 2018 – 0.06%. Combustion analysis has not been required in the past 2 years due to low operating hours.

**Applicable Standards and Limitations:**

**A. Control of Visible Emissions**

**COMAR 26.11.09.05E(2) - Emission During Idle Mode.** “A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.” This requirement is not applicable during Preventative Maintenance.

**COMAR 26.11.09.05E(3) - Emission During Operating Mode.** “A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.” This requirement is not applicable during Preventative Maintenance.

**Exceptions. COMAR 26.11.09.05E(4)**

“(a) Section E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 minutes for the purpose of clearing exhaust system.

(b) Section E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(i) Engines that are idled continuously when not in service: 30 minutes;

(ii) All other engines: 15 minutes.

(c) Section E(2) and E(3) does not apply while maintenance, repair, or testing is being performed by qualified mechanics.”

**Compliance Demonstration**

The Permittee shall properly operate and maintain the engines in a manner to minimize visible emissions. The Permittee shall retain records of preventative maintenance that relate to combustion performance on site for at least 5 years and make these records available to the Department upon request. **[Reference: COMAR 26.11.03.06C]** The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, “Report of Excess Emissions and Deviations.”

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**B. Control of Sulfur Oxides Emissions**

**COMAR 26.11.09.07A(2) – Control of Sulfur Oxides from fuel burning equipment.** “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV: **(b) Distillate fuel oils, 0.3 percent.**”

**Compliance Demonstration**

The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil is in compliance with the limitation on the sulfur content of the fuel oil or obtain sulfur in fuel analyses of oil that is representative of the oil burned.

**[Reference: COMAR 26.11.03.06C]** The Permittee shall maintain records of fuel supplier’s certification or sulfur in fuel analyses and shall make records available to the Department upon request. The Permittee shall report fuel supplier certification or a copy of the sulfur in fuel analyses to the Department upon request. **[Reference: COMAR 26.11.09.07C]**

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**C. Control of Nitrogen Oxides Emissions**

**COMAR 26.11.09.08G – Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 percent or less and Combustion Turbines with a Capacity Factor Greater than 15 percent.**

- (1) “A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:
- (a) Provide certification of the capacity factor of the equipment to the Department in writing;
  - (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
  - (c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;
  - (d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
  - (e) Maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request.”

**Compliance Demonstration**

The Permittee shall perform a combustion analysis and optimize combustion at least once annually when the hours of operation exceed 500 during the year.

**[Reference: COMAR 26.11.09.08G(1)(b)]**

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The Permittee shall calculate the capacity factor of the engines for each calendar year within 30 days after the end of each year. **[Reference: COMAR 26.11.03.06C]**

The Permittee shall maintain:

- (1) Records of the calculated capacity factors. **[Reference: COMAR 26.11.03.06C]**
- (2) Records of hour of operation. **[Reference: COMAR 26.11.02.19.C(1)(b)]**
- (3) Records of combustion analysis performed if the hours of operation exceed 500. **[Reference: COMAR 26.11.09.08G(1)(c)]**
- (4) Record of training program attendance for each operator. **[Reference: COMAR 26.11.09.08G(1)(e)]**

The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report. **[Reference: COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C]**

The Permittee shall submit a record of training program attendance for each operator to the Department upon request. **[Reference: COMAR 26.11.09.08G(1)(e)]**

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**D. Control of Hazardous Air Pollutants (HAPs) Emissions**

**40CFR 63 Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**§63.6585 - Am I subject to this subpart?**

“You are subject to this subpart if you own or operate a stationary RICE at a **major** or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.”

**§63.6590 - What parts of my plant does this subpart cover?**

“This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.”

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**§63.6640** - How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

“(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.”

**Compliance Demonstration**

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The Permittee must install a non-resettable hour meter on the emergency generator if one is not already installed. **[Reference: §63.6625(f)]**

The Permittee shall maintain for the emergency generator a log of the hours of operation (including dates and times) and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.) which are recorded by a non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation and how many hours are spent on non-emergency operation. The Permittee shall report the hours of operation, and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.) to the Department in the annual emission certification report due on April 1 of each year. **[Reference: COMAR 26.11.03.06C]**

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**Emissions Units: FSC-HAW-Unit1 and FSC-HAW-Unit4**

**FSC-HAW-Unit1:** H.A. Wagner Unit 1 is a residual oil or natural gas fired unit (nominally rated at 133 MW). **[MDE Reg. No. 5-0469]**

Unit1 is a Babcock and Wilcox dry bottom wall-fired boiler with a rated heat input capacity of 1337 MMBtu/hr. Unit1 is controlled by an electrostatic precipitator and is equipped with CEMS for NO<sub>x</sub> and CO<sub>2</sub> and a COM for opacity. SO<sub>2</sub> is measured by fuel flow analysis. Unit1 was installed in 1956.

**FSC-HAW-Unit4:** H.A. Wagner Unit 4 is a residual oil-fired unit with natural gas fired used for start-up (nominally rated at 415 MW). **[MDE Reg. No. 4-0017]**

Unit 4 is a Babcock and Wilcox dry bottom wall-fired boiler with a rated heat input capacity of 4200 MMBtu/hr. Natural gas ignitors are used for startup and shutdown. The unit is controlled by a multiple cyclone and is equipped with CEMS for NO<sub>x</sub> and CO<sub>2</sub>, and a COM for opacity. SO<sub>2</sub> is measured by fuel flow analysis. Unit4 was installed in 1972. All new CEMS were installed July 1, 2012.

These boilers are not subject to requirements of 40 CFR Part 60 Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators since these boilers commenced construction prior to August 17, 1971.

These boilers are subject to the requirements of 40 CFR Part 63 Subpart UUUUU-National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units (**FSC-HAW-Unit1, FSC-HAW-Unit4**). **See Table IV-12.**

**Compliance Status:**

During January 22, 2020, Compliance Evaluation of Wagner Units 1 & 4, **FSC-HAW-Unit1** was operating on natural gas only for onsite utilities (no load put on the grid). There were no other Wagner units operating.

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On January 31, 2019, **FSC-HAW-Unit1** was stack tested for particulate matter while combusting fuel oil. The stack test passed, with the following measured emissions:

Source	Particulate matter (lb./MMBtu)	Particulate matter (gr/dscf @ 50% excess air)	Permit limit (gr/dscf @ 50% excess air)
<b>FSC-HAW-Unit1</b>	0.018	0.009	0.02

On July 27, 2018, **FSC-HAW-Unit4** was stack tested for particulate matter (Filterable PM and condensable PM). The stack passed with the following results:

Source	PM (lb./hr.)		Particulate (gr/dscf @ 50% EA)	Permit limit (gr/dscf @ 50% excess air)
	Inorganic condensable	Condensable		
<b>FSC-HAW-Unit4</b>	94.1	17.5	7.8	0.011

Year	Annual residual fuel oil usage (gallons),		Annual natural gas (scf)	Annual Capacity Factor (%)	
	Unit1	Unit4		Unit1	Unit4
2017	50,546.6	1,158,278.1	1,281,580.9	1.07	0.53
2018	128,196.3	3,930,013.8	2,283,991.7	1.96	1.74
2019	339,205.9	879,828.3	3,099,328.4	2.86	0.42

NO<sub>x</sub> CEMS is in service on both **FSC-HAW-Unit1** and **FSC-HAW-Unit4**. **FSC-HAW-Unit4** had a CEMS RATA performed on July 27, 2018. **FSC-HAW-Unit1** had a CEMS RATA performed on August 8, 2018. Linearity tests are performed quarterly. Daily calibration test results and monitor downtime are reported in quarterly CEMS reports.

**Applicable Standards and Limitations:**

**A. Control of Visible Emissions**

**COMAR 26.11.09.05 - Visible Emissions.**

**"A. Fuel Burning Equipment.**

(2) Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

(3) Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period."

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**Compliance Demonstration**

The Permittee shall continuously monitor opacity of the stack gases using a continuous opacity monitor that is certified in accordance with 40 CFR Part 60, Appendix B and that meets the quality assurance criteria of COMAR 26.11.31.06.

**[Reference: COMAR 26.11.01.10]**

All information required by this regulation to be maintained or reported to the Department shall be retained and made available for review by the Department for a minimum of 5 years from the time the report is submitted. **[Reference:**

**COMAR 26.11.01.10E]**

**COMAR 26.11.01.10D. - Record Keeping and Reporting Requirements.**

“(1) System Downtime Reporting Requirements.

(a) All COM downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the first day on which downtime occurs.

(b) The COM downtime report shall include the reason, if known, for the breakdown and the estimated period of time that the COM will be down. The owner or operator shall notify the Department by telephone when the COM has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in 40 CFR Part 51 Appendix P, and is producing data.

(c) Except as otherwise approved by the Department and the EPA, a COM shall operate in compliance with the requirements of §B(2) of this regulation and collect data for at least 95 percent of the source's operating time during any calendar quarter. The alternative measurement plan required in §B(1)(b) of this regulation shall be used at all times when the COM fails to conform to performance standards required by §B(2) of this regulation during data collection.

(2) Data Reporting Requirements.

(a) A COM shall automatically reduce all data to six-minute block averages calculated from 24 or more equally spaced data points.

(b) All COM data shall be reported in a format approved by the Department.

(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:

(i) The cause, time periods, and the opacity of all emissions which exceed the applicable quarterly, daily and hourly emission standards as provided in COMAR 26.11.09.05A(4);

(ii) The COM and installation downtimes, including the time and date of the beginning and end of each downtime period, and whether the downtime was scheduled;

(iii) The cause of all COM downtime;

(iv) The total operating time for the quarter, and the total time and percent of the operating time during the quarter that excess emissions occurred, and the percentage of COM downtime, during the calendar quarter;

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- (v) Quarterly quality assurance activities;
  - (vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status;
  - (vii) Other information that the Department determines is necessary to evaluate the data or to ensure that compliance is achieved.”
- 

**B. Control of Particulate Matter Emissions**

**COMAR 26.11.09.06B(3) – Solid Fuel Burning Equipment.** “A person may not cause or permit particulate matter caused by the combustion of solid fuel to be discharged into the atmosphere in excess of the amounts shown in Table 1.” ***For these units, the maximum allowable emissions of particulate matter 0.020 gr/scfd @ 50% excess air.***

**COMAR 26.11.09.06C. Determination of Compliance (by stack test).**

“Compliance with the particulate matter emissions standards in this regulation shall be calculated as the average of 3 test runs using EPA Test Method 5 or other United States Environmental Protection Agency test method approved by the Department.”

**Compliance Demonstration**

The Permittee, in accordance with COMAR 26.11.01.04A(1), shall conduct biennial testing using EPA Reference Methods of 40 CFR Part 60, Appendix A. The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date. **[Reference: COMAR 26.11.03.06C]** The Permittee shall maintain records of the results of all particulate emission compliance tests. **[Reference: COMAR 26.11.01.05A(2)]**

**COMAR General Administrative Provisions – Testing and Monitoring.**

The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to test and a notice of intent to test at least 10 days prior to the scheduled test date. The Permittee shall submit the results of stack tests in a final report within 60 days from test completion. **[Reference: COMAR 26.11.01.04A].**

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**C. Control of Sulfur Oxides**

**1. COMAR 26.11.09.07: Control of Sulfur Oxides from Fuel Burning Equipment.**

“A. Sulfur Content Limitations for Fuel. A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:

- (2) In Areas III and IV: (c) **Residual fuel oils, 1.0 percent.**”

**Compliance Demonstration**



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The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix D - Emissions Data Protocol for Gas-Fired and Oil-Fired Units. The Permittee shall comply with the fuel analyses requirements as found in 40 CFR Part 75 Appendix D. The Permittee shall retain, on site for at least 5 years, fuel oil analyses of samples collected in accordance with 40 CFR Part 75 Appendix D. The Permittee shall submit fuel oil analyses to the Department upon request. **[Reference: COMAR 26.11.06.03C]**

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**2. Acid Rain Provisions**

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

**Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C]**. The Permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. **[Reference: See Acid Rain Permit]**

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**3. Cross-State Air Pollution Rule**

**See Table IV-14: CSAPR for requirements**

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**D. Control of Nitrogen Oxides**

**1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT**

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**2. Acid Rain Provisions**

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

**Compliance Demonstration**

The Permittee shall install, certify, operate, and maintain a NO<sub>x</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B-Monitoring Provisions. **[Reference: §75.10(a)(1) and Acid Rain Permit]**.

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The Permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. [Reference: See Acid Rain Permit]

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**3. Cross-State Air Pollution Rule**  
**See Table IV-14: CSAPR for requirements**

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E. Control HAP Emissions.  
**See Table IV-13: MACT Subpart UUUUU Requirements.**

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**Emissions Units: FSC-HAW-Unit1 and FSC-HAW-Unit4 (Cont'd)**

**40 CFR Part 64-Compliance Assurance Monitoring (CAM) requirements.**

**CAM - FSC-HAW-Unit1:**

CAM Triggers

Unit1 is major source – located at a Title V facility

Unit1 is subject to an emission limitation or standard for PM when firing residual fuel oil and must use a control device to meet the limit.

Uncontrolled potential emissions of PM exceed the major source threshold.

ESP System Operation & Control

The HAW 1 plant has two (2) Kopper Company electrostatic precipitators (ESPs). The ESPs are comprised of two field precipitator banks and is located just east of the ID fans. There is one ESP per ID fan. The flue gas flows through the precipitator where the fly ash is sequentially removed by the emitter (discharge) wires collecting plates. The fly ash is collected on the plates and then knocked off into hoppers by electromagnetic rappers that are automatically triggered on a set timed schedule.

The precipitator operates on the static electricity principle. As exhaust stream enters the ESP, particulate matter in the gas passes between negatively charged high-voltage discharge wires and collector plates maintained at zero potential. The field creates a negative charge on the particulate and the charge particles are attracted to the collector plates. Rapping the plates causes the accumulated ash to fall from the plates and into the hoppers. The entire precipitator system is controlled by an OEM energy management system. The management system optimizes the precipitators to maintain an opacity set point in the most energy efficient manner. The controller monitors the opacity and applies corresponding field strength to the precipitator fields in order to keep the opacity below

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regulated levels. In times of abnormal conditions and startup/shutdown, the management system is overridden, and the precipitator is set to maximum strength.

Monitoring Approach PM vs. Opacity

Continuous compliance with the applicable PM limit (firing residual fuel oil, only) will be demonstrated by correlating the opacity emissions on a unit-specific basis and by continuously monitoring the unit's opacity against that correlation. Normal operation of the ESP will be verified by monitoring the potential upset or malfunction of the ESP by monitoring the functionality of the automated power management system, by confirmation with the periodic stack test measurements, and by documenting ongoing operation and maintenance of the ESP based on Constellation Standard Operation and Maintenance procedures.

The facility operates and maintains Continuous Opacity Monitors (COMs) in accordance with COMAR 26.11.01.10, COMAR 26.11.01.11, and COMAR 26.11.31 and the more stringent requirements of the Acid Rain monitoring rules under the Code of Federal Regulations 40 CFR Part 75.

Various studies of the correlation between opacity and particulate mass emissions have been conducted and recent review and critical analysis of these studies concluded that the equations developed by Robertson, R. et. al., as reported in the Proceedings of the EPRI May 1999 CEM Users Group Meeting, represents the best available and most conservative starting point for the development of a unit-specific opacity to particulate mass emission correlation equation for utility boilers. The generic boiler equation developed by Richardson can be customized to a specific utility boiler by adjusting the curve up or down based on actual stack test data from that particular unit. The Permittee has historical opacity and PM measurement data available from periodic stack testing and this data can and will be used to customize the Robertson relationship to each specific boiler unit subject to this CAM. These curves can predict at what level of opacity registered by the COM that the PM standard may be exceeded. The primary CAM indicator is opacity. The one-hour block average opacity shall be used as the compliance indicator to show compliance with the PM standard. (See CAM Tables attached for specific values, set/alert points, etc.) In order to allow the unit operators to take corrective action before the opacity level is exceeded, Constellation shall set a trigger level of 90% of the PM emissions standard to be alerted and /or take action as deemed necessary assure compliance.

The secondary CAM indicator shall be the operation and monitoring of the power (energy) management system of the ESP to ensure normal operation and to identify potential malfunctions. The ESP power management system ensures

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continued operation of the ESP within specific parameters to optimize performance. A visual and audible alarm in the control room indicates an excursion from normal operating conditions which shall trigger certain operator responses. This approach to CAM will provide a reasonable assurance that the ESP operating normally and that the resulting PM emissions remain in continuous compliance with the PM standard of 0.03 gr/dscf (69 mg/dscm).

<b>Table IV-7a</b>		
<b>COMPLIANCE ASSURANCE MONITORING REQUIREMENTS – PART 64</b>		
<b>Electrostatic Precipitator for FSC-HAW-Unit1 (Residual Fuel Oil firing only)</b>		
<b>Applicable Requirement</b>	<b>PM:</b> Emission Limit 0.02 gr/scfd @ 50% excess. COMAR 26.11.09.06B(2)	
I. Indicator	Indicator #1 - <b>Opacity</b> Continuous Opacity Monitor (COM)	Indicator #2 – <b>ESP Alarm Monitoring</b> Malfunction of Electrostatic Precipitator (ESP).
Measurement Approach	Opacity data is measured and recorded by a certified opacity monitoring system	Operators oversee the ESP unit operation and will react as appropriate to control system alarms that indicate abnormal operation
II. Indicator Range	An internal, non-enforceable <b>trigger level of 10.2% average opacity</b> is established. The unit operators will take corrective action when the trigger level is exceeded	ESP is normally operated with at least three fields in service. The activation of a control room alarm indicates possible operation of the ESP outside the normal operating conditions.
III. Performance Criteria	The COM meets the performance criteria for installation and operation as specified in COMAR 26.11.01.10, COMAR 26.11.01.11, COMAR 26.11.31, and the more stringent requirements of the Acid Rain monitoring rules of 40 CFR Part 75	Normal operation of the ESP is continuously monitored
1. Data Representativeness	COM data will be collected and validated in accordance with COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.	The alarm points have been set within the distributed control system (DCS) to alert the operators of potential ESP malfunction.
2. Verification of Operational Status (new or modified equipment)	COM data availability requirements are continuous data availability excluding audit and check periods and malfunctions that are corrected within two hours each day. CEM downtime up to 10% of operating time may initiate follow-up by MDE per COMAR 26.11.31.	Continuous monitoring of the DCS will alert the operators of potential ESP malfunction.

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3. QA/QC Practices and Criteria	COM QA/QC procedures are consistent with the applicable requirements of COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.	Calibration, maintenance and operation of the ESP in accordance with good operating practice.
4. Monitoring Frequency	Opacity is measured on a continuous basis with the exception of periods when the fans are shut off and there is no flame in the boiler Data from the backup monitoring system and ESP power management system will be used to indicate normal ESP performance during QA/QC periods or monitor malfunctions.	Monitoring is ongoing, so that alarm notifications are triggered whenever a potential malfunction occurs.
5. Data Collection Procedures	Opacity data is collected in a certified Data Acquisition System (DAS) and is archived for at least five years.	The ESP operations are continually monitored. Hard copies of event data will be stored for five years.
6. Averaging Period	One-minute average data is collected and stored. Three-hour block averages are calculated and stored based on the minute-by-minute data, for use as a compliance surrogate of Method 5 based in PM mass emission limits.	So long as the ESP is being operated normally, the primary indicator (opacity) will be relied upon to indicate continuous compliance with the PM standard.

**CAM - FSC-HAW-Unit4:**

**CAM Triggers**

Unit4 is major source – located at a Title V facility.

Unit4 is subject to an emission limitation or standard for PM when firing residual fuel oil and must use a control device to meet the limit.

Uncontrolled potential emissions of PM exceed the major source threshold.

**Multi-cyclone Mechanical Collector Operation & Control**

The HAW 4 plant has a multi-cyclone mechanical collector to control particulate emissions (PM). A multi-cyclone is a passive device with no moving parts designed to separate out and collect large ash particles that are in the boiler flue gas. The multi-cyclone is a series of individual cyclone separators arranged in parallel. Flue gas enters the conical section of the cyclone tangentially and is spun at a high velocity. Centrifugal force and inertia drive the solid into the cyclone wall, where they collide and slide down the wall and are collected in a hopper. Performance of a multi-cyclone is inherent to the original design and cannot be affected by operator intervention. The collection efficiency of each cyclone is a function of its initial design and geometry; they are fabricated units with fixed dimensions and lack any means of adjustment.

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Monitoring Approach PM vs. Opacity

Continuous compliance with the applicable PM limit (firing residual fuel oil, only) will be demonstrated by correlating the opacity emissions on a unit-specific basis and by continuously monitoring the unit's opacity against that correlation. The Part 70 Operating Permit requires annual stack testing using EPA reference Method 5 for particulate emissions to determine compliance with the PM standard.

The facility operates and maintains Continuous Opacity Monitors (COMs) in accordance with COMAR 26.11.01.10, COMAR 26.11.01.11, and COMAR 26.11.31 and the more stringent requirements of the Acid Rain monitoring rules under the Code of Federal Regulations 40 CFR Part 75.

Various studies of the correlation between opacity and particulate mass emissions have been conducted and recent review and critical analysis of these studies concluded that the equations developed by Robertson, R. et. al., as reported in the Proceedings of the EPRI May 1999 CEM Users Group Meeting, represents the best available and most conservative starting point for the development of a unit-specific opacity to particulate mass emission correlation equation for utility boilers. The generic boiler equation developed by Richardson can be customized to a specific utility boiler by adjusting the curve up or down based on actual stack test data from that particular unit. Constellation has historical opacity and PM measurement data available from periodic stack testing and this data can and will be used to customize the Robertson relationship to each specific boiler unit subject to this CAM. These curves can predict at what level of opacity registered by the COM that the PM standard may be exceeded. The primary CAM indicator is opacity. The one-hour block average opacity shall be used as the compliance indicator to show compliance with the PM standard. (See CAM Tables attached for specific values, set/alert points, etc.) In order to allow the unit operators to take corrective action before the opacity level is exceeded, Constellation shall set a trigger level of 90% of the PM emissions standard to be alerted and /or take action as deemed necessary assure compliance.

<b>Table IV-7b</b>	
<b>COMPLIANCE ASSURANCE MONITORING REQUIREMENTS – PART 64</b>	
<b>Electrostatic Precipitator for FSC-HAW-Unit4 (Residual Fuel Oil firing only)</b>	
<b>Applicable Requirement</b>	<b>PM:</b> Emission Limit 0.02 gr/scfd @ 50% excess. COMAR 26.11.09.06B(2)
I. Indicator	Indicator #1 - <b>Opacity</b>
	Continuous Opacity Monitor (COM)

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Measurement Approach	Opacity data is measured and recorded by a certified opacity monitoring system
II. Indicator Range	An internal, non-enforceable <b>trigger level of 10.6% average opacity</b> is established as the Indicator Range. The unit operators will take corrective action when the trigger level is exceeded
III. Performance Criteria	The COM meets the performance criteria for installation and operation as specified in COMAR 26.11.01.10, COMAR 26.11.01.11, COMAR 26.11.31, and the more stringent requirements of the Acid Rain monitoring rules of 40 CFR Part 75
1. Data Representativeness	COM data will be collected and validated in accordance with COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.
2. Verification of Operational Status (new or modified equipment)	COM data availability requirements are continuous data availability excluding audit and check periods and malfunctions that are corrected within two hours each day. CEM downtime up to 10% of operating time may initiate follow-up by MDE per COMAR 26.11.31.
3. QA/QC Practices and Criteria	COM QA/QC procedures are consistent with the applicable requirements of COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.
4. Monitoring Frequency	Opacity is measured on a continuous basis with the exceptions of periods when the fans are shut off and there is no flame in the boiler. Data from the backup monitoring system and ESP power management system will be used to indicate normal ESP performance during QA/QC periods or monitor malfunctions.
5. Data Collection Procedures	Opacity data is collected in a certified Data Acquisition System (DAS) and is archived for at least five years.
6. Averaging Period	One-minute average data is collected and stored. Three-hour block averages are calculated and stored based on the minute-by-minute data, for use as a compliance surrogate of Method 5 based in PM mass emission limits.

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**Emissions Units: FSC-HAW-Unit2**

**FSC-HAW-Unit2:** H.A. Wagner Unit 2 is a natural gas fired unit rated at 250 MMBtu/hr. **[MDE Reg. No. 3-0017]**. The emissions from H.A. Wagner Unit 2 are discharged through a single stack (Emission Point: FSC-HAW-Unit2-EP1).

**Background**

**FSC-HAW-Unit2** is a Babcock & Wilcox wall-fired boiler originally designed to burn coal and began operation in 1959. As of June 1, 2020, Wagner 2 ceased to burn coal and has permanently dismantled the material handling equipment associated with feeding coal to this boiler and disconnected Wagner 2 from the electric generator, thereby rendering it permanently incapable of burning coal or directly generating electricity. This change satisfies the requirement to cease burning coal as specified in the 1-hour SO<sub>2</sub> Consent Decree between Raven Power and MDE signed on December 4, 2019.

**FSC-HAW-Unit2** changed from a coal-fired unit to a natural gas-fired unit. The change was made in response to the Consent Decree issued December 4, 2019.

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MDE approved the change in a letter dated July 15, 2020. The new boiler heat input rating for this unit on natural gas is 250 MMBtu/hr. A permit to construct was issued on December 19, 2020 for modification of the boiler to change from a coal fired unit to a natural gas fired industrial boiler. This boiler will be used as an auxiliary boiler to the remaining electric generating units at the Wagner generating station during startup/shutdown operations as well as providing space heating at the site.

**MACT**

This Unit2 is now subject to the requirements of 40 CFR Part 63 Subpart DDDDD-National Emission Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers and Process Heaters (**FSC-HAW-Unit2**).

**Compliance Status:**

**FSC-HAW-Unit2** was stack tested for PM and HCl on January 15, 2019. This stack test was performed for MATS compliance. (40 CFR Part 63 Subpart UUUUU). The results showed compliance. *MATS compliance is no longer required.*

Due to the permanent cessation of the coal-firing, **FSC-HAW-Unit2** will no longer be subject to the following requirements: COMAR 26.11.09.06 (Control of Particulate Matter) – CAM requirements for the electrostatic precipitator is no longer needed, COMAR 26.11.09.07 (Control of Sulfur Oxides); COMAR 26.11.27 (Emissions Limits for Power Plants); COMAR 26.11.38 (Control of NO<sub>x</sub> Emission from Coal-fired Electric Generating Units), and 40 CFR 63 Subpart UUUUU (Utility MACT).

**Applicable Standards and Limitations:**

**A. Control of Visible Emissions**

**COMAR 26.11.09.05 - Visible Emissions.**

**"A. Fuel Burning Equipment.**

(2) Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

(3) Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period."

**Compliance Demonstration**

The Permittee shall properly operate and maintain the boiler in a manner to prevent visible emissions. The Permittee shall keep records of the maintenance



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performed on the boiler. The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, Plant Wide Condition, "Report of Excess Emissions and Deviations" [Reference: **COMAR 26.11.03.06C**]

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**B. Control of Nitrogen Oxides**

**1. NO<sub>x</sub> RACT Requirements**

**COMAR 26.11.09.08 - Control of NO<sub>x</sub> Emissions for Major Stationary Sources.**

**"B General Requirements and Conditions**

**(4) Emissions Averaging.**

(a) Instead of meeting the source specific emission standards set forth in §§C—F of this regulation, a person who owns or operates more than one installation subject to this regulation may achieve compliance by meeting an overall source or system-wide NO<sub>x</sub> emission reduction that is equivalent to or greater than the NO<sub>x</sub> emission reduction that would be achieved if each individual installation complied with applicable requirements.

(b) A person who proposes to comply with this regulation by averaging the emissions of two or more installations (separate stacks) shall submit a proposal to the Department for approval.

(c) Any proposal for emissions averaging approved by the Department is not an acceptable means of compliance until the proposal is also approved by the EPA as a revision to the State Implementation Plan (SIP).

(d) A person who proposes to average emissions to comply with this regulation shall:

(i) Have the capability to continuously monitor NO<sub>x</sub> emissions for each installation to be included in the emissions averaging; and

(ii) Demonstrate to the Department that on each day of operation the total plant or system-wide NO<sub>x</sub> emissions are equal to or less than the NO<sub>x</sub> emissions that would be discharged if each installation met the applicable emission standard in this regulation."

**"C. Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 250 Million Btu Per Hour or Greater.**

(1) A person who owns or operates fuel-burning equipment with a rated heat input capacity of 250 Million Btu per hour or greater shall equip each installation with combustion modifications or other technologies to meet the NO<sub>x</sub> emission rates in §C(2) of this regulation.

(2) The maximum NO<sub>x</sub> emission rates as pounds of NO<sub>x</sub> per Million Btu per hour are: (c) 0.30 for oil fired or gas/oil fired units located at an electric generating facility."

(3) A person who owns or operates fuel burning equipment with a rated heat input capacity of 250 Million Btu per hour or greater shall install, operate,

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calibrate, and maintain a certified NO<sub>x</sub> CEM or an alternative NO<sub>x</sub> monitoring method approved by the Department and the EPA on each installation.”

**Compliance Demonstration**

**NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT**

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**2. Acid Rain Provisions**

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

**Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].**

The Permittee shall install, certify, operate, and maintain a NO<sub>x</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B-Monitoring Provisions. **[Reference: §75.10(a)(1) and Acid Rain Permit].**

The Permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. **[Reference: See Acid Rain Permit]**

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**3. Cross-State Air Pollution Rule**

**See Table IV-14: CSAPR for requirements**

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**C. Control of HAP Emissions**

**See Table IV-8a: MACT Subpart DDDDD Requirements.**

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**Emissions Units: FSC-HAW-Unit2 Cont'd**

**FSC-HAW-Unit2:** H.A. Wagner Unit 2 is a natural gas fired unit rated at 250 MMBtu/hr. **[MDE Reg. No. 3-0017]**

The emissions from H.A. Wagner Unit 2 are discharged through a single stack (Emission Point: FSC-HAW-Unit2-EP1).

**Compliance Status:**

Tune-up was completed on January 15, 2021, upon initial start-up of the boiler. **FSC-HAW-Unit2** is defined as a limited-use boiler.

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**Applicable Standards and Limitations:**

Control of HAPs Emissions

**40 CFR Part 63, Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters**

**§63.7485 - Am I subject to this subpart?**

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of HAP, except as specified in §63.7491. For purposes of this subpart, a major source of HAP is as defined in §63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in §63.7575.

**§63.7495 - When do I have to comply with this subpart?**

“(d) You must meet the notification requirements in §63.7545 according to the schedule in §63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.”

(f) If you own or operate an existing EGU that becomes subject to this subpart after January 31, 2016, you must be in compliance with the applicable existing source provisions of this subpart on the effective date such unit becomes subject to this subpart.”

**§63.7500 - What emission limitations, work practice standards, and operating limits must I meet?**

“(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.”

(3) At all times, you must operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

“(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in §63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.”

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***Limited-use boiler*** or *process heater* means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable average annual capacity factor of no more than 10 percent. [Reference: §63.7575]

**Operational Limit**

In order to meet the definition of a “Limited use boiler” under 40 CFR 63 Subpart DDDDD, the Permittee shall limit the annual capacity factor as defined in §63.7575 for Wagner 2 (**FSC-HAW-Unit2**) boiler to no more than 10 percent. [Reference: MDE PTC No. 003-0468-3-0017 Condition Part C (4), issued December 19, 2020]

**Compliance Demonstration**

The Permittee must complete a tune-up on Wagner 2 boiler (limited use boiler) every five years as specified in §63.7540. *Limited use boiler* must conduct tune-up as specified in paragraphs (a)(10)(i) through (vi) of §63.7540 to demonstrate continuous compliance. The Permittee shall conduct initial tune-up upon initial start-up of the boiler. [Reference: §63.7515(d)]

**§63.7530 - How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?**

“(e) You must include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 to this subpart, and that the assessment is an accurate depiction of your facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.

(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.7545(e). (*Notice of Compliance Report received at the Department on February 16, 2021*).

(g) If you elect to demonstrate that a gaseous fuel meets the specifications of another gas 1 fuel as defined in §63.7575, you must conduct an initial fuel specification analyses according to §63.7521(f) through (i) and according to the frequency listed in §63.7540(c) and maintain records of the results of the testing as outlined in §63.7555(g). For samples where the initial mercury specification has not been exceeded, you will include a signed certification with the Notification of Compliance Status that the initial fuel specification test meets the gas specification outlined in the definition of other gas 1 fuels.”

**Continuous Compliance Requirements**

**§63.7540 - How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?**

“(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 13 to this subpart, the work practice standards in

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Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.”

“(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. **This frequency does not apply to limited-use boilers** and process heaters, as defined in §63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown).

Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO<sub>x</sub> requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

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(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.”

(12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in §63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.

(13) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 13 to this subpart that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in this subpart. These deviations must be reported according to the requirements in §63.7550.”

**Notification, Reports, and Records**

**§63.7555 - What records must I keep?**

“(a)(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.”

**§63.7560 - In what form and how long must I keep my records?**

“(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years.”

**§63.7545 - What notifications must I submit and when?**

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“(a) You must submit to the Administrator all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

(c) As specified in §63.9(b)(4) and (5), if you startup your new or reconstructed affected source on or after January 31, 2013, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source. For a **new** or reconstructed affected source that has reclassified to major source status, you must submit an Initial Notification not later 120 days after the source becomes subject to this subpart.

“(e) If you are required to conduct an initial compliance demonstration as specified in §63.7530, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8), as applicable. If you are not required to conduct an initial compliance demonstration as specified in §63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) and must be submitted within 60 days of the compliance date specified at §63.7495(b).”

“(8) In addition to the information required in §63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official: (i) “This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR part 63 subpart DDDDD at this site according to the procedures in §63.7540(a)(10)(i) through (vi).”

“(f) If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to this subpart, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in §63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in §63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared, or the natural gas supply interruption began.

(4) Type of alternative fuel that you intend to use.”

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(5) Dates when the alternative fuel use is expected to begin and end.

“(h) If you have switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:

- (1) The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.
- (2) The currently applicable subcategory under this subpart.
- (3) The date upon which the fuel switch or physical change occurred.”

**§63.7550 - What reports must I submit and when?**

“(a) You must submit each report in Table 9 to this subpart that applies to you.

You must submit a(n)	The report must contain	You must submit the report
<b>1. Compliance report</b>	<b>a. Information required in §63.7550(c)(1) through (5); and</b>	Semiannually, annually, biennially, or <b>every 5 years according to the requirements in §63.7550(b).</b>

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section.

**For units that are subject only to a requirement to conduct an annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.**

(1) The first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in §63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in §63.7495.

(2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler



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or process heater in §63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. **Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.**

(4) Each subsequent compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. **Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.**

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to the requirements of a tune up, they must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of this section, (xiv) and (xvii) of this section, and paragraph (c) (5)(iv) of this section for limited-use boiler or process heater.

“(5)(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) The total operating time during the reporting period.”

“(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, **or 5-year tune-up** according to §63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.”

“(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.”

“(3) You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA’s CDX). You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.”

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**Emissions Units: FSC-HAW-Unit3**

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**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. **[MDE Reg. No. 3-0003]** (*Permit to construct issued in 2022 for fuel switch from coal fired to blend of residual oil and distillate oils; Modification expected to be completed by Dec 31, 2025*).

**MACT**

This boiler is subject to the requirements of 40 CFR Part 63 Subpart UUUUU- National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units (**FSC-HAW-Unit3**). **See Table IV-13.**

**Compliance Status:**

During July 30, 2020, Compliance Evaluation for Wagner Unit 3 via questionnaire with a follow-up call on August 17, 2020, the results are as follows:

**FSC-HAW-Unit3** capacity factors are: 2017 – 8.29%; 2018 – 17.38%; and 2019 - 6.63%.

On June 17, 2022, **FSC-HAW-Unit3** was stack tested. The results are as follows for Particulate Matter emissions:

Pollutant	Emission Rate (lb./hr.)	Average Emissions (gr./dscf) @ 50% excess air	Permit (gr./dscf) @ 50% excess air
Particulate Matter (filterable)	41.8	0.01	0.03

On July 28-29, 2021, **FSC-HAW-Unit3** was stack tested. The results are as follows for Particulate Matter and Lead emissions:

Pollutant	Emission Rate (lb./MMBtu)	Emission Rate (lb./hr.)	Concentration (gr./dscf) @ 50% excess air	Permit (gr./dscf) @ 50% excess air
Particulate Matter	0.008	23.69	0.004	0.03
Lead	7.04E-07	0.0021	3.33E-07	NA

**Applicable Standards and Limitations:**

**A. Control of Visible Emissions**

**COMAR 26.11.09.05 - Visible Emissions.**

**“A. Fuel Burning Equipment.**

(2) Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

(3) Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:

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- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.”

**Compliance Demonstration**

The Permittee shall continuously monitor opacity of the stack gases using a continuous opacity monitor that is certified in accordance with 40 CFR Part 60, Appendix B and that meets the quality assurance criteria of COMAR 26.11.31.06.

**[Reference: COMAR 26.11.01.10]**

All information required by this regulation to be maintained or reported to the Department shall be retained and made available for review by the Department for a minimum of 5 years from the time the report is submitted. **[Reference:**

**COMAR 26.11.01.10E]**

**COMAR 26.11.01.10D. - Record Keeping and Reporting Requirements.**

“(1) System Downtime Reporting Requirements.

(a) All COM downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the first day on which downtime occurs.

(b) The COM downtime report shall include the reason, if known, for the breakdown and the estimated period of time that the COM will be down. The owner or operator shall notify the Department by telephone when the COM has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in 40 CFR Part 51 Appendix P, and is producing data.

(c) Except as otherwise approved by the Department and the EPA, a COM shall operate in compliance with the requirements of §B(2) of this regulation and collect data for at least 95 percent of the source's operating time during any calendar quarter. The alternative measurement plan required in §B(1)(b) of this regulation shall be used at all times when the COM fails to conform to performance standards required by §B(2) of this regulation during data collection.

(2) Data Reporting Requirements.

(a) A COM shall automatically reduce all data to six-minute block averages calculated from 24 or more equally spaced data points.

(b) All COM data shall be reported in a format approved by the Department.

(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:

(i) The cause, time periods, and the opacity of all emissions which exceed the applicable quarterly, daily and hourly emission standards as provided in COMAR 26.11.09.05A(4);

(ii) The COM and installation downtimes, including the time and date of the beginning and end of each downtime period, and whether the downtime was scheduled;

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- (iii) The cause of all COM downtime;
- (iv) The total operating time for the quarter, and the total time and percent of the operating time during the quarter that excess emissions occurred, and the percentage of COM downtime, during the calendar quarter;
- (v) Quarterly quality assurance activities;
- (vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status;
- (vii) Other information that the Department determines is necessary to evaluate the data or to ensure that compliance is achieved.”

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**B. Control of Particulate Matter Emissions**

**1. COMAR 26.11.09.06B:** Areas III and IV. The following apply in Areas III and IV:

**(2) Residual Fuel-Oil-Burning Equipment.** A person may not cause or permit particulate matter caused by the combustion of residual fuel oil to be discharged into the atmosphere in excess of the amounts shown in Table 1 in Regulation .09 of this chapter.

**(3) Solid Fuel Burning Equipment.** “A person may not cause or permit particulate matter caused by the combustion of solid fuel to be discharged into the atmosphere in excess of the amounts shown in Table 1.” ***For these units, the maximum allowable emissions of particulate matter 0.03 gr/scfd @ 50% excess air.***

**COMAR 26.11.09.06C. Determination of Compliance (by stack test).**

“Compliance with the particulate matter emissions standards in this regulation shall be calculated as the average of 3 test runs using EPA Test Method 5 or other United States Environmental Protection Agency test method approved by the Department.”

**Compliance Demonstration**

The Permittee, in accordance with COMAR 26.11.01.04A(1), shall conduct annual testing using EPA Reference Methods of 40 CFR Part 60, Appendix A. The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to the proposed test date and provide a 10-day notice to the Department prior to the scheduled test date. **[Reference: COMAR 26.11.03.06C]**

The Permittee shall maintain records of the results of all particulate emission compliance tests. For compliance stack test required under Conditions B-IV-6 and B-IV-7 of CPCN No. 9338, Wagner shall maintain all records of stack test notifications, reports, and results for a period of at least 5 years. **[Reference: COMAR 26.11.06.03C, COMAR 26.11.02.02H and CPCN No. 9338, Condition B-IV-26, 32]**

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The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to the proposed test date and provide a 10-days' notice prior to the scheduled test date. The Permittee shall submit the results of stack tests to the Department in a final report within 60 days from the date of the test completion. **[Reference: COMAR 26.11.06.03C, COMAR 26.11.02.02H and CPCN No. 9338, Condition B-IV-26, 32]**

*See CAM Requirements in Table IV-9a for additional monitoring.*

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**C. Control of Sulfur Oxides**

**1. COMAR 26.11.09.07: Control of Sulfur Oxides from Fuel Burning Equipment.**

**"A. Sulfur Content Limitations for Fuel.** A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:

**(2) In Areas III and IV: (a) All solid fuels, 1.0 percent, (b) Distillate fuel oils, 0.3 percent."**

**C. Request for Analyses.** Any person offering to sell or deliver fuel or any person responsible for equipment in which fuel or process gas is burned, upon request, shall submit to the Department or control officer such analyses of fuel or process gas as may be required to determine compliance with this regulation."

**Fuel Type Limits:** The only permissible fuel for Wagner Unit 3 (**FSC-HAW-Unit3**) is solid fossil fuel including bituminous coal, sub-bituminous coal, and a blend of bituminous and sub-bituminous coals, except that natural gas may be used during startups. **[Reference: COMAR 26.11.02.02H & CPCN No. 9338, conditions B-IV-1]**

*Note: December 6, 2021, approval letter, the PPRP and MDE stated that Condition B-IV-1 of the CPCN Initial Recommended License Conditions for Public Service Commission Case No. 9338 should be revised to include a provision that the sulfur content of the blend of distillate and residual oils in Wagner 3 be limited to a maximum of 0.3% by weight. This corresponds to the limit for distillate oil stated in COMAR 26.11.09.07A(2)(b).*

**Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].**

The Permittee shall obtain fuel supplier in fuel analyses or collect and analyze coal samples of coal received that demonstrate that the coal is in compliance

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with the 1.0 percent sulfur content in fuel limitation on an as burned basis.

**[Reference: COMAR 26.11.03.06C]**

“The owner or operator of fuel-burning equipment burning coal, with a heat input capacity of 100 million Btu per hour or greater, shall install CEMs to measure and record sulfur dioxide, nitrogen oxide, either oxygen or carbon dioxide, and flow.”

**[Reference: COMAR 26.11.01.11B(2)]**

The Permittee shall retain, on site for at least 5 years, fuel supplier certifications stating that the coal is in compliance with the sulfur content in the fuel limitation or analyses of collected samples. **[Reference: COMAR 26.11.06.03C]**

The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E. **[Reference: COMAR 26.11.01.11E(2)].**

The Permittee shall submit coal supplier certifications or sulfur in fuel analyses to the Department upon request. The Permittee shall comply with the reporting requirements of COMAR 26.11.01.11E(1) and E(2)

**(1) CEM System Downtime Reporting Requirements.**

(a) All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the breakdown.

(b) The system breakdown report required by §E(1)(a) of this regulation shall include the reason, if known, for the breakdown and the estimated period of time that the CEM will be down. The owner or operator of the CEM shall notify the Department by telephone when an out-of-service CEM is back in operation and producing data that has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in COMAR 26.11.31, and is producing data.

**(2) CEM Data Reporting Requirements.**

(a) All test results shall be reported in a format approved by the Department.

(b) Certification testing shall be repeated when the Department determines that the CEM data may not meet performance specifications because of component replacement or other conditions that affect the quality of generated data.

(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:

(i) The cause, time periods, and magnitude of all emissions which exceed the applicable emission standards;

(ii) The source downtime including the time and date of the beginning and end of each downtime period and whether the source downtime was planned or unplanned;

(iii) The time periods and cause of all CEM downtime including records of any repairs, adjustments, or maintenance that may affect the ability of the CEM to meet performance specifications of emission data;

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- (iv) Quarterly totals of excess emissions, installation downtime, and CEM downtime during the calendar quarter;
  - (v) Quarterly quality assurance activities;
  - (vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status; and
  - (vii) Other information required by the Department that is determined to be necessary to evaluate the data, to ensure that compliance is achieved, or to determine the applicability of this regulation.
- (d) All information required by this regulation to be reported to the Department shall be retained and made available for review by the Department for a minimum of 2 years from the time the report is submitted.”

**[Reference: COMAR 26.11.06.03C and COMAR 26.11.01.11E(1)&(2)]**

**2. Healthy Air Act**

**COMAR 26.11.27.03C. SO<sub>2</sub> Emission Limitations.**

(1) Except as provided in §E of this regulation, annual SO<sub>2</sub> emissions from each affected electric generating unit may not exceed the number of tons in §C(2) of this regulation.

(2) Annual Tonnage Limitations.

Affected Unit	Annual SO <sub>2</sub> Tonnage Limitations Beginning
	January 1, 2013
H.A Wagner Unit 3	2,490 tons

**COMAR 26.11.27.03E. System-Wide Compliance Determinations.**

(1) Compliance with the emission limitations in §§B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.

(2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§B and C of this regulation.

(3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.

**Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].**

**COMAR 26.11.27.05 – Monitoring and Reporting Requirements**

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“A. Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.”

The Permittee shall maintain all records necessary to demonstrate compliance with the requirements of the Healthy Air Act, COMAR 26.11.27.

The Permittee shall maintain all information required to be reported or maintained under COMAR 26.11.01.11, on site for at least 5 years, and make available to the Department upon request.

**[Reference: COMAR 26.11.03.06C and COMAR 26.11.01.11E(2)(d)].**

**COMAR 26.11.27.05 – Monitoring and Reporting Requirements**

“B. Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.

C. Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department.”

The Permittee shall submit the following CEMS reports to the Department for all CEMS required to be operated with the boilers:

(a) CEM System Downtime Reports – All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the breakdown;

(b) Quarterly CEM Summary Reports – A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department and shall include the information required under COMAR 26.11.01.11E(2)(c)(i)-(vii).

**[Reference: COMAR 26.11.01.11E(1)&(2)]**

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### **3. Acid Rain Provisions**

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

### **Compliance Demonstration**



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The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].**

The Permittee shall install, certify, operate, and maintain a SO<sub>2</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B-Monitoring Provisions. **[Reference: §75.10(a)(1) and Acid Rain Permit].**

The Permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. **[Reference: See Acid Rain Permit]**

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**4. Cross-State Air Pollution Rule**  
**See Table IV-14: CSAPR for requirements**

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D. Control of Nitrogen Oxides

**1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT**

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**2. Healthy Air Act**

**COMAR 26.11.27.03B. NO<sub>x</sub> Emission Limitations.**

“(1) Except as provided in §E of this regulation, annual NO<sub>x</sub> emissions from each affected electric generating unit may not exceed the number of tons in §B(2) of this regulation.

**(2) Annual Tonnage Limitations.**

Affected Unit	Annual NO <sub>x</sub> Tonnage Limitations Beginning
	January 1, 2012
H.A Wagner Unit 3	1,115 tons

**(3) Except as provided in §E of this regulation, ozone season NO<sub>x</sub> emissions from each affected electric generating unit may not exceed the number of tons in §B(4) of this regulation.”**

**(6) Ozone Season Tonnage Limitations.**

Affected Unit	Ozone Season NO <sub>x</sub> Tonnage Limitations Beginning
	May 1, 2012
H.A Wagner Unit 3	481 tons

**(7) Electric System Reliability During Ozone Seasons.**

(a) An exceedance of the NO<sub>x</sub> limitations in §B(4) or (6) of this regulation which occurs because PJM Interconnection, LLC or a successor independent system operator, acts to invoke "Maximum Emergency Generation", "Load Reduction", "Voltage Reduction", "Curtaiment of Non-essential Building Load", or "Manual Load Dump" procedures in accordance with the current PJM Manual, or a PJM alert preceding such action as to a generating unit that has temporarily shut

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down in order to avoid potential interruption in electric service and maintain electric system reliability is not a violation of this chapter provided that:

- (i) Within 36 hours following the action, the owner or operator of the affected electric generating unit or units notifies the Manager of the Air Quality Compliance Program of the action taken by PJM Interconnection and provides the Department with documentation of the action which is satisfactory to the Department;
  - (ii) Within 48 hours after completion of the action, the owner or operator of the affected unit or units provides the Department with the estimated NO<sub>x</sub> emissions in excess of the emission limitation; and
  - (iii) *See State-only enforceable section of the permit for additional requirement.*
- (b) The owner or operator of an electric generating unit or system, as applicable, shall send written notice to the Manager of the Air Quality Compliance Program not later than 5 business days following the day when the cumulative ozone season NO<sub>x</sub> emissions of an electric generating unit or system, as applicable, are:
- (i) Equal to approximately 80 percent of the applicable ozone season emission limitation; and
  - (ii) Equal to the applicable ozone season emission limitation. “

**COMAR 26.11.27.03E. System-Wide Compliance Determinations.**

“(1) Compliance with the emission limitations in §§B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.

(2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§B and C of this regulation.

(3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.”

**Compliance Demonstration**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. [Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C]

**COMAR 26.11.27.05 – Monitoring and Reporting Requirements**

“A. Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.”

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**Continuous Emissions Monitoring Requirements** – Requires the Permittee to operate all CEMS under the requirements of COMAR 26.11.01.11. **[Reference: COMAR 26.11.01.11]**

The Permittee shall maintain records sufficient to demonstrate compliance with the requirements of the Healthy Air Act, COMAR 26.11.27.

The Permittee shall maintain all information required to be reported or maintained under COMAR 26.11.01.11, on site for at least years, and make available to the Department upon request.

**[Reference: COMAR 26.11.03.06C and COMAR 26.11.01.11E(2)(d)].**

**COMAR 26.11.27.05 – Monitoring and Reporting Requirements**

“**B.** Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.

**C.** Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department.”

The Permittee shall submit the following CEMS reports to the Department for all CEMS required to be operated with the boilers:

(a) CEM System Downtime Reports – All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the breakdown;

(b) Quarterly CEM Summary Reports – A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department and shall include the information required under COMAR 26.11.01.11E(2)(c)(i)-(vii).

**[Reference: COMAR 26.11.01.11E(1) & (2)]**

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### **3. Acid Rain Provisions**

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

### **Compliance Demonstration**

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The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].**

The Permittee shall install, certify, operate, and maintain a NO<sub>x</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B-Monitoring Provisions. **[Reference: §75.10(a)(1) and Acid Rain Permit].**  
The Permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. **[Reference: See Acid Rain Permit]**

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**4. Cross-State Air Pollution Rule**  
**See Table IV-14: CSAPR for requirements**

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E. Control of HAP Emissions  
**See Table IV-13: MACT Subpart UUUUU Requirements.**

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F. Operational Limits  
**See Table IV-9b-Boilers Modification.**

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**Emissions Units: FSC-HAW-Unit3 (Cont'd)**

**COMPLIANCE ASSURANCE MONITORING (CAM)**

CAM Triggers

Unit is located at a Title V facility. Unit subject to an emission limitation or standard (COMAR) for PM and must use a control device to meet the limit. Uncontrolled potential emissions of PM exceed the major source threshold.

FSC-HAW-Unit3

**Applicable Regulations:** COMAR 26.11.09.06B(3).

**Emission Limits:** 0.03 gr/scfd at 50% excess air,

**Monitoring Requirements:** Maintain COM; Monitor ESP Power Management Alarms.

**A. Monitoring Approach – Continuous Opacity Monitoring (COM)**

Opacity data is measured and recorded by a certified opacity monitoring system.

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**Justification: COM**

The source is a CAM applicable emission unit for which PM emissions is controlled using an ESP.

**Rationale for monitoring approach and indicator**

COMs measure the visible emissions in stack gases. The use of a COM as an indicator for PM emissions is justified in that visible emissions are directly related to PM emissions and can be considered an indicator for such emissions.

**Rationale for use of indicator range(s)**

The indicator range was established at an opacity level that would indicate PM emissions are such that corrective action is necessary.

**B. Monitoring Approach – ESP Power Management Alarm**

Operators oversee the ESP unit operation and will react as appropriate to control system alarms.

**Justification: COM**

The source is a CAM applicable emission unit for which PM emissions is controlled using an ESP.

**Rationale for monitoring approach and indicator**

ESP control PM by using an electric charge to remove particulates from a stream of stack gas. The performance of the ESP is tied directly to the power management system of the unit. Alarms associated with the power management system would indicate a potential malfunction of the ESP.

**Rationale for use of indicator range(s)**

The indicator range was established based on a representative functionality alarm of the ESP. Set points of the power management system alarms will indicate to operators of a potential malfunction of the ESP so that corrective action may be taken.

<b>Table IV-9a</b>		
<b>COMPLIANCE ASSURANCE MONITORING REQUIREMENTS – PART 64</b>		
<b>Electrostatic Precipitator (ESP) for FSC-HAW-Unit3</b>		
<b>Applicable Requirement</b>	PM: Emission limit: 0.03 gr/scfd @ 50% excess air. COMAR 26.11.09.06B(3).	
I. Indicator	Indicator #1	Indicator #2

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	Continuous Opacity Monitor (COM)	Monitor ESP Power Management Alarm: Audible and visual alarm integrated with the power management system of the ESP
Measurement Approach	Opacity data is measured and recorded by a certified opacity monitoring system	Operators oversee the ESP unit operation and will react as appropriate to control system alarms that indicate abnormal operation
II. Indicator Range	An internal, non-enforceable trigger level of 15.4% average opacity is established. The unit operators will take corrective action when the trigger level is exceeded	The activation of the alarm indicates possible operation of the ESP outside the normal operating conditions.
III. Performance Criteria	The COM meets the performance criteria for installation and operation as specified in COMAR 26.11.01.10, COMAR 26.11.01.11, COMAR 26.11.31, and the more stringent requirements of the Acid Rain monitoring rules of 40 CFR Part 75	The operation of the power management system is continuously monitored
1. Data Representativeness	COM data will be collected and validated in accordance with COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.	The alarm points have been set to provide the operators with an early warning of potential ESP malfunction.
2. Verification of Operational Status (new or modified equipment)	COM data availability requirements are continuous data availability excluding audit and check periods and malfunctions that are corrected within two hours each day. CEM downtime up to 10% of operating time may initiate follow-up by MDE per COMAR 26.11.31.	Continuous monitoring will detect deviations from normal operating conditions of the power management system.
3. QA/QC Practices and Criteria	COM QA/QC procedures are consistent with the applicable requirements of COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.	Calibration, maintenance and operation of the power management system in accordance with specifications.
4. Monitoring Frequency	Opacity is measured on a continuous basis with the exception of periods when the fans are shut off and there is no flame in the boiler. Data from the backup monitoring system and ESP power management system will be used to indicate normal ESP performance during QA/QC periods or monitor malfunctions.	The power management system parameters will be monitored recorded at least four times within each operating hour.

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5. Data Collection Procedures	Opacity data is collected in a certified Data Acquisition System (DAS) and is archived for at least five years.	The power management parameters are recorded using power management system DAS and electronically archived for at least 90 days, hard copy of event data will be stored for five years.
6. Averaging Period	One-minute average data is collected and stored. Three-hour block averages are calculated and stored based on the minute-by-minute data, for use as a compliance surrogate of Method 5 based in PM mass emission limits.	The power management alarm setting is set by the power management system OEM guidelines. So long as the ESP is being operated normally, the primary indicator (opacity) will be relied upon to indicate continuous compliance with the PM standard.

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**Emissions Units: FSC-HAW-Unit3, FSC-BS-Unit1, FSC-BS-Unit2 & FSC-BS-Aux1: Boilers Modification.**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the flyash separation equipment on site. The reburning of flyash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC).

Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. **[MDE Reg. Nos. 3-0015 & 3-0016]** (Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).

**FSC-BS-AuxBlr1:** No. 2 oil-fired Auxiliary Boiler used for supplying steam to Brandon Shores Station. **[MDE Reg. Nos. 4-0507].** *FSC-BS-AuxBlr1 received permit to construct in 2022 to add natural gas firing capability; modification expected to be completed by Dec 31,2025*

**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. **[MDE Reg. No. 3-0003]** (Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).

**Applicable Standards and Limitations:**

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Operational Limits

**[Reference: MDE-ARA Permit to Construct No. 003-0468-3-0003, 3-0015, 3-0016 & 4-0507 issued June 29, 2022]**

To demonstrate compliance synthetic minor status of “the project”, the installations being modified are subject to the following operational limit: total 12-month MMBtu heat input values (30,038,445 MMBtu/yr.) shall be assessed on a rolling monthly basis and shall not be exceeded without approval from the Department. This total 12-monthly heat input value includes the combined monthly heat inputs for **Wag 3, BS 1, BS 2, and BS Aux1** boilers.

The Permittee shall revise the MATS Averaging/Implementation Plan to reflect the modification of **Wag 3, BS 1 and BS 2** and submit to the Department for review and approval within 60 days after each of the units discontinue coal combustion, if applicable.

The Permittee shall amend the NO<sub>x</sub> RACT averaging Plan to reflect **Wag 3, BS 1 and BS 2** revised NO<sub>x</sub> limit of 0.3 lbs./MMBtu and submit to the Department for review and approval within 60 days after each of the units discontinue coal combustion.

Compliance Demonstration

The Permittee shall calculate: (a) the monthly total MMBtu heat input for **Wag 3, BS 1, and BS 2** using the hourly heat input values required to be recorded and reported under 40 CFR Part 75 CEMS requirements; (b) the monthly heat input for **BS Aux1** from the average heat content of the #2 fuel oil and natural gas and fuel usages for each month.

After project completion, the Permittee must complete a tune-up on **BS Aux1** (Limited use boiler) every five years as specified in §63.7540. *Limited use boiler* must conduct tune-up as specified in paragraphs (a)(10)(i) through (vi) of §63.7540 to demonstrate continuous compliance. The Permittee shall conduct initial tune-up upon initial start-up of the boiler. **[Reference: §63.7515(d)]**

After project completion, the Permittee must complete a tune-up (**Wag 2, BS 1 & BS 2**) of the EGU burner and combustion controls at least each 36 calendar months, or each 48 calendar months if neural network combustion optimization software is employed, as specified in §63.10021(e).

The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, records of the following information:

- (1) Fuel usage for the days that **Wag 3, BS 1 & BS 2 and BS Aux1** boilers operated.



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- (2) The 24-month block capacity factor for **Wag 3, BS 1 & BS 2** boilers for the contiguous period commencing on the first of the month following completion of fuel switch.
- (3) The annual capacity factor for the **BS Aux1** boiler.
- (4) Tune-up conducted on **BS Aux1** boiler. [Reference: §63.7555(a)(3)]
- (5) Tune-up conducted on **Wag 3, BS 1 & BS 2** boilers. [Reference: §63.9991]
- (6) The total 12-month rolling MMBtu heat inputs combined for **Wag 3, BS 1, BS 2, and BS Aux1** boilers  
 [Reference: MDE-ARA Permit to Construct No. 003-0468-3-0003, 3-0015, 3-0016 & 4-0507 issued June 29, 2022]

**Emissions Units: FSC-HAW-CT: Combustion Turbine**

**FSC-HAW-CT:** H.A. Wagner combustion turbine is No. 2 oil fired combustion turbine used to supply “black start” capability to H.A. Wagner and for peaking operation. [MDE Reg. No 4-0007]

**Compliance Status**

The CT runs when it gets called to run by the PJM, typically on hot and cold days. It also has black start capability. During January 22, 2020, Compliance Evaluation of Wagner CT, the results are as follows:

Year	Annual 12-month rolling capacity factor (%)	Hours of Operation	Gallons if No. 2 fuel usage, based on monthly fuel tank reading
2017	0.2	21	23,635
2018	0.9	72.4	139,348
2019	0.1	13.3	16,187

There have been no incidents of excess emissions reported from the CT in the past 2 years.

**Applicable Standards and Limitations:**

**A. Control of Visible Emissions**

**COMAR 26.11.09.05A(2) – Fuel Burning Equipment**

“Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.”

**COMAR 26.11.09.05A(3) - Exceptions.** “Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:

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- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.”

**Compliance Demonstration**

The Permittee shall verify that there are no visible emissions when burning No. 2 fuel oil. An observer shall perform an EPA Reference Method 9 observation of stack emissions for an 18-minute period at least once for every 168 hours of operation on oil or at a minimum once per calendar year.

The Permittee shall perform the following if emissions are visible to human observer:

- (a) inspect combustion control system and combustion turbine operations,
- (b) perform all necessary adjustments and/or repairs to the combustion turbine within 48 hours of operation so that visible emissions are eliminated; and
- (c) document in writing the results of inspections, adjustments and/or repairs to the combustion turbine.

After 48 hours of operation if the required adjustments and/or repairs had not eliminated the visible emissions, the Permittee shall perform another Method 9 observation once daily when the combustion turbine is operating on No.2 fuel oil for 18 minutes until corrective action have eliminated visible emissions. The Permittee shall maintain records of the results of visual emissions observations for a period of at least 5 years. The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, “Report of Excess Emissions and Deviations.” **[Reference: COMAR 26.11.03.06C].**

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**B. Control of Sulfur Oxides Emissions**

**COMAR 26.11.09.07: Control of Sulfur Oxides from Fuel Burning Equipment.**

“A. Sulfur Content Limitations for Fuel. A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:

- (2) In Areas III and IV: (b) **Distillate fuel oils, 0.3 percent.**

**Compliance Demonstration**

The Permittee shall obtain fuel supplier certification stating that the fuel oil is in compliance with the sulfur content in the fuel limitation or obtain sulfur in fuel analyses of oil that is representative of the oil burned. The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with the sulfur content in the fuel limitation or the sulfur in fuel analyses for at least 5 years. The Permittee shall submit fuel certification report or fuel analyses if requested by the Department. **[Reference: COMAR 26.11.03.06C]**

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**C. Control of Nitrogen Oxides Emissions**

**COMAR 26.11.09.08G – Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 percent or less and Combustion Turbines with a Capacity Factor Greater than 15 percent.**

(1) A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

(a) Provide certification of the capacity factor of the equipment to the Department in writing;

(b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;

(c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;

(d) *Not Applicable*, and

(e) *Not Applicable*. “

**Compliance Demonstration**

The Permittee shall perform a combustion analysis and optimize combustion at least once annually when hours of operation exceed 500 during the calendar year. **[Reference: COMAR 26.11.09.08G(1)(b)]**

The Permittee shall calculate the capacity factor of the combustion turbine for each calendar year within 30 days after the end of each year. **[Reference: COMAR 26.11.03.06C]**

The Permittee shall maintain the following:

1. Records of the calculated capacity factors;
2. Records of hours of operation; and
3. Records of the results of combustion analysis performed if the hours of operation exceed 500.

**[Reference: COMAR 26.11.09.08G(1)(c) & COMAR 26.11.03.06C]**

The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing by April 1<sup>st</sup> of the following calendar year. **[Reference: COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C]**

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**Emissions Units: FSC-HAW-MH**

The H.A. Wagner material handling system consists of various equipment and processes to transport coal, fly ash, hydrated lime or equivalent, powdered activated carbon and other materials. There are facilities to mix coal with additives to reduce stack emissions. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment. **[MDE Reg. No. 6-1144]**

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Compliance Status

During July 30, 2020, Compliance Evaluation for Wagner material handling via questionnaire with a follow-up call on August 17, 2020, the results are as follows:

The designed efficiency of the DSI sorbent storage silo bin filters is 0.005 gr/DSCF. A visual observation has been incorporated into the DSI offloading form. Upon offloading the sorbent, a visual observation of any dust emissions from the bin vent filter is noted once the discharge pressure of the truck has stabilized. If dust emissions are visible, the unloading will be stopped, and the control room notified.

On June 25, 2021, VE observation was conducted (Method 9 evaluation) for the two (2) coal conveyors subject to the requirements of 40 CFR §60.258(d). Per the requirements, test should be completed within 12 months of the date of the last performance test was required to be completed. The last Method 9 test for this unit was performed on May 26, 2020. FSC-HAW-Unit3 operated infrequently this year. Therefore, the first available opportunity for VE observation was performed on June 25, 2021.

**Applicable Standards and Limitations:**

A. Control of Particulate Matter Emissions

**1. COMAR 26.11.06.03B. - Particulate Matter from Confined Sources.**

“(2) Areas III and IV. (a) A person may not cause or permit to be discharged into the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD (68.7 mg/dscm).”

The Permittee shall design the DSI sorbent storage silo bin vent filters to achieve a controlled emission rate of no more than 0.03 gr/SCFD. **[Reference: COMAR 26.11.02.02H]**

**Compliance Demonstration**

The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMP) Plan that will be used to prevent particulate matter from becoming airborne.

The Permittee shall update the BMP Plan, as required by the initial Part 70 permit for this facility when a revision is needed to ensure that reasonable precautions will be used to prevent particulate matter from this equipment from becoming airborne and that adequate inspection will be conducted and documented. The BMP shall include provisions for routine inspections of emission sources and controls, corrective measures, and recordkeeping for such. The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the ash handling and solid fossil fuel handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material. The Permittee shall keep the results of the monthly inspections for a

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period of five (5) years. The Permittee shall maintain the written reasonable precautions (BMP) at the facility and make it available to the Department upon request. The Permittee shall report the results of the inspections and provide a copy of the current BMP plan upon request by the Department. **[Reference: COMAR 26.11.03.06C]**

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**2. COMAR 26.11.06.03D - Particulate Matter from Materials Handling and Construction.**

“A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, but not be limited to, the following when appropriate as determined by the control officer:

- (1) Use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land.
- (2) Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts.
- (3) Installation and use of hoods, fans, and dust collectors to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting of buildings or other similar operations.
- (4) Covering, at all times when in motion, open-bodied vehicles transporting materials likely to create air pollution. Alternate means may be employed to achieve the same results as would covering the vehicles.
- (5) The paving of roadways and their maintenance in clean condition.
- (6) The prompt removal from paved streets of earth or other material which has been transported there by trucks or earth moving equipment or erosion by water.”

**Compliance Demonstration**

The Permittee shall maintain records necessary to demonstrate compliance with the filterable PM emission rate from the DSI sorbent storage silo bin vent filters, including equipment specifications, and make these records available to the Department upon request. **[Reference: COMAR 26.11.02.02H]**

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**B. NSPS**

**40 CFR Part 60, Subpart Y—Standards of Performance for Coal Preparation and Processing Plants**

**§60.254 - Standards for coal processing and conveying equipment, coal storage systems, transfer and loading systems, and open storage piles.**

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“(b) On and after the date on which the performance test is conducted or required to be completed under §60.8, whichever date comes first, an owner or operator of any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified after April 28, 2008, must meet the requirements in paragraphs (b)(1) through (3) of this section, as applicable to the affected facility.

(1) Except as provided in paragraph (b)(3) of this section, the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit 10 percent opacity or greater.

(2) The owner or operator must not cause to be discharged into the atmosphere from any mechanical vent on an affected facility gases which contain particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf).

(3) Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of paragraph (b)(1) of this section.”

**Note:** *The limits in this section only apply to the four (4) coal conveyors that transport coal to and from the coal additive mixing facility.*

**Compliance Demonstration**

**§60.255 - Performance tests and other compliance requirements.**

“(b) An owner or operator of each affected facility that commenced construction, reconstruction, or modification after April 28, 2008, must conduct performance tests according to the requirements of §60.8 and the methods identified in §60.257 to demonstrate compliance with the applicable emissions standards in this subpart as specified in paragraphs (b)(1) and (2) of this section.

(2) For each affected facility subject to an opacity standard, an initial performance test must be performed. Thereafter, a new performance test must be conducted according to the requirements in paragraphs (b)(2)(i) through (iii) of this section, as applicable, except as provided for in paragraphs (e) and (f) of this section. Performance test and other compliance requirements for coal truck dump operations are specified in paragraph (h) of this section.

(i) If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test must be conducted within 90 operating days of the date that the previous performance test was required to be completed.

(ii) If all 6-minute average opacity readings in the most recent performance test are equal to or less than half the applicable opacity limit, a new performance test must be conducted within 12 calendar months of the date that the previous performance test was required to be completed.

(iii) An owner or operator of an affected facility continuously monitoring scrubber parameters as specified in §60.256(b)(2) is exempt from the requirements in

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paragraphs (b)(2)(i) and (ii) if opacity performance tests are conducted concurrently with (or within a 60-minute period of) PM performance tests.”

“(c) If any affected coal processing and conveying equipment (e.g., breakers, crushers, screens, conveying systems), coal storage systems, or coal transfer and loading systems that commenced construction, reconstruction, or modification after April 28, 2008, are enclosed in a building, and emissions from the building do not exceed any of the standards in §60.254 that apply to the affected facility, then the facility shall be deemed to be in compliance with such standards.”

**§60.258 - Reporting and Recordkeeping.**

“(a) The owner or operator of a coal preparation and processing plant that commenced construction, reconstruction, or modification after April 28, 2008, shall maintain in a logbook (written or electronic) on-site and make it available upon request. The logbook shall record the following:

(1) The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from manufacturer recommendation, if any, shall be noted.

(2) The date and time of periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted.

(3) The amount and type of coal processed each calendar month.

(4) The amount of chemical stabilizer or water purchased for use in the coal preparation and processing plant.

(5) Monthly certification that the dust suppressant systems were operational when any coal was processed and that manufacturer's recommendations were followed for all control systems. Any variance from the manufacturer's recommendations, if any, shall be noted.

(6) Monthly certification that the fugitive coal dust emissions control plan was implemented as described. Any variance from the plan, if any, shall be noted. A copy of the applicable fugitive coal dust emissions control plan and any letters from the Administrator providing approval of any alternative control measures shall be maintained with the logbook. Any actions, e.g., objections, to the plan and any actions relative to the alternative control measures, e.g., approvals, shall be noted in the logbook as well.”

**§60.258 - Reporting and recordkeeping**

“(b) For the purpose of reports required under section 60.7(c), any owner operator subject to the provisions of this subpart also shall report semiannually periods of excess emissions as follow:

(3) All 6-minute average opacities that exceed the applicable standard.”

“(d) After July 1, 2011, within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with this subpart,

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the owner or operator of the affected facility must submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE data base available at <http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main>. For performance tests that cannot be entered into WebFIRE (*i.e.*, Method 9 of appendix A-4 of this part opacity performance tests) the owner or operator of the affected facility must mail a summary copy to United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; mail code: D243-01; RTP, NC 27711.”

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**C. CPCN No. 9338, Condition B-VI-3**

The Permittee shall apply a chemical; dust suppressant on an as needed basis to the sub bituminous coal storage pile in the coal yard to reduce fugitive PM emissions. The Permittee shall apply the chemical dust suppressant in accordance with manufacturer's recommended application instructions. A dust suppressant shall also be applied, as needed to reduce fugitive PM emissions, to the following sub bituminous coal transfer points: Belt 1 to Belt 2 (barge unloading); Belt 2 to Belt 3; Belt 3 to MB Belt 3; Under-pile Syntron to MC Belt; MC Belt to Bradford Breaker; Bradford Breaker to D Belt; Conveyor D to Pug Mill Feed Conveyor (or F Belt); Pug Mill Product Conveyor to Conveyor F; and F Belt to G Belt or M Belt.

**Compliance Demonstration**

The Permittee shall perform a monthly inspection of the material handling transfer points and operations to verify that the reasonable precautions (e.g. BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the solid fossil fuel handling system and the ash handling system to determine whether PM is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the solid fossil fuel handling and ash handling systems are transferring material. **[Reference: CPCN No. 9338 Condition B-VI-5 and COMAR 26.11.02.02H]**

The Permittee shall update the facility's existing plan that contains an explanation of the reasonable precautions or BMPs that will be used to prevent particulate matter from becoming airborne. The updated BMPs shall also document procedures for chemical dust suppressant application. The Permittee shall update the BMP within 6 months of the CPCN issuance. The Permittee shall keep the results of the monthly inspections for a period of five (5) years. The Permittee shall maintain the written reasonable precautions (e.g., BMPs) at the facility and make it available to the Department upon request. **[Reference: CPCN No. 9338 Condition B-VI-4, 6, 7 and COMAR 26.11.02.02H]**



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The Permittee shall report the results of the inspections and provide a copy of the current BMP plan upon request by the Department. **[Reference: CPCN No. 9338 Condition B-VI-8 and COMAR 26.11.02.02H]**

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**Emissions Units: FSC-BS-Unit1 & FSC-BS-Unit2; FSC-HAW-Unit1 & FSC-HAW-Unit4; FSC-HAW-Unit2 & FSC-HAW-Unit3 (Cont'd)**

**NO<sub>x</sub> RACT**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel-fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site. **[MDE Reg. Nos.3-0015 & 3-0016]** *(Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).*

**FSC-HAW-Unit1:** H.A. Wagner Unit 1 is a residual oil or natural gas fired unit. **[MDE Reg. No. 5-0469]**

**FSC-HAW-Unit4:** H.A. Wagner Unit 4 is a residual oil-fired unit with natural gas fired used for start-up. **[MDE Reg. No 4-0017]**

**FSC-HAW-Unit2:** H.A. Wagner Unit 2 is a natural gas fired unit. **[MDE Reg. No. 3-0017]** *(modified in 2020-fuel switch from coal fired to natural gas fired).*

**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. **[MDE Reg. No 3-0003]** *(Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).*

**NO<sub>x</sub> RACT**

The most recent NO<sub>x</sub> RACT Averaging Plan was revised in April 2021 to accommodate the **FSC-HAW-Unit2** change to an industrial boiler and reduced the limit to 70 percent of the emissions total.

These units are subject to NO<sub>x</sub> RACT Averaging Plan that was revised and made effective upon signature of a Consent Agreement signed February 18, 2016. Prior to the 2016 Consent Agreements, the units were subject to a 2012 NO<sub>x</sub> RACT Averaging Plan.

The 2012 NO<sub>x</sub> RACT Averaging Plan was revised to remove the C.P. Crane Generating Station upon the sale of the facility. In addition to removing the

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Crane units, the Plan was revised to increase the facility-wide reduction from 5 percent to 20 percent.

Compliance Status

The NO<sub>x</sub> limits are applicable regardless of the type of fuel burned. CEMs data indicates immediately if the facility is out of compliance with the limits. Compliance with the NO<sub>x</sub> RACT averaging plan is included in the quarterly CEMs reports. Each January, the Permittee submits a letter indicating that the NO<sub>x</sub> system total is less than 70% of their NO<sub>x</sub> RACT total.

Control of Nitrogen Oxides

**NO<sub>x</sub> RACT Requirements**

**NO<sub>x</sub> RACT Averaging Plan Consent Decree dated April 8, 2021, and COMAR 26.11.09.08** which requires that the Fort Smallwood Road Complex (Brandon Shores Unit1, Brandon Shores Unit2, H.A. Wagner Unit1, H.A. Wagner Unit2, H.A. Wagner Unit3 and H.A. Wagner Unit4) meet the following NO<sub>x</sub> RACT limits:

Table 1 – Summary of NO <sub>x</sub> RACT Averaging Plan Limits (2016)		
Facility	Unit	RACT Limit, lb./MMBtu
Brandon Shores	1	0.5
	2	0.5
H.A. Wagner	1	0.3
	2	0.3
	3	0.5
	4	0.3

Individual unit compliance with NO<sub>x</sub> RACT requirements will be determined daily on a 30-day rolling average basis. Annual compliance will also be demonstrated by showing that annual mass emissions from the units in the averaging plan are less than 70% of the mass emissions that would have been allowed on an individual basis.

The following methodology will be used to calculate 30-day rolling emissions and determine compliance:

- (1) Calculate daily system and NO<sub>x</sub> RACT emission rates:

$$ER_{System} = \sum (ER_i * (HI_i / HI_{Total}))$$

$$ER_{RACT} = \sum (ER_{RACT,i} * (HI_i / HI_{Total}))$$

where:

- ER<sub>System</sub> = System average emission rate, lb./MMBtu
- ER<sub>RACT</sub> = System average NO<sub>x</sub> RACT limit, lb./MMBtu
- ER<sub>i</sub> = Daily emission rate for unit i, lb./MMBtu
- ER<sub>RACT,i</sub> = Daily NO<sub>x</sub> RACT limit for unit i, lb./MMBtu

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$H_{li}$  = Daily heat input for unit i, MMBtu

$H_{Total}$  = Daily heat for all of the units =  $\sum H_{li}$ , MMBtu

- (2) After 30 days, calculate 30-day rolling emission rate for the system and the NO<sub>x</sub> RACT:

$$ER_{30 \text{ Day System}} = (\sum (ER_{System})) / 30$$

$$ER_{30 \text{ Day RACT}} = (\sum (ER_{RACT})) / 30$$

where:

$ER_{30 \text{ Day System}}$  = 30-day rolling system average emission rate, MMBtu/lb

$ER_{30 \text{ Day RACT}}$  = 30-day rolling system average emission rate, MMBtu/lb

- (3) Calculate mass emissions on a daily basis:

$$NO_{X \text{ 30 Day System}} = ER_{30 \text{ Day System}} * H_{Total} / 2000$$

$$NO_{X \text{ RACT}} = ER_{30 \text{ Day RACT}} * H_{Total} / 2000$$

where:

$NO_{X \text{ 30 Day System}}$  = NO<sub>x</sub> mass emissions based on a 30-day rolling system average emission rate, tons

$NO_{X \text{ RACT}}$  = NO<sub>x</sub> mass emissions based on a 30-day rolling RACT limit, tons

- (4) Determine compliance with NO<sub>x</sub> RACT:

$$NO_{X \text{ System}} < NO_{X \text{ RACT}}$$

In addition, on a yearly basis Raven will certify that the NO<sub>x</sub> mass emissions for the six units included in the averaging plan did not exceed 70% of the emissions allowable under the NO<sub>x</sub> RACT limits.

$$NO_{X \text{ Annual System}} < 0.70 * NO_{X \text{ RACT Total}}$$

where:

$NO_{X \text{ Annual System}}$  = Annual NO<sub>x</sub> mass emissions for the units in the averaging plan

$NO_{X \text{ RACT Total}}$  = Allowable NO<sub>x</sub> mass emissions based on the NO<sub>x</sub> RACT limits

### **Compliance Demonstration**

All the units included in the most recent Averaging Plan have continuous emissions monitors (CEM) for monitoring NO<sub>x</sub> emissions. These units follow the

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operations, maintenance, recordkeeping and reporting requirements contained in 40 CFR Part 75. **[Reference: Consent Agreement dated April 8, 2021]**

The Permittee shall operate, calibrate, and maintain a certified NO<sub>x</sub> CEM or an alternative NO<sub>x</sub> monitoring method approved by the Department and the EPA on each installation. **[Reference: COMAR 26.11.09.08C(3)]**

The Permittee certify CEMs in accordance with Part 75, Appendix A.

**[Reference: COMAR 26.11.09.08B(2)(b)]**

The Permittee shall maintain at each of the Generating Units records and information adequate to verify the calculations used to demonstrate compliance with the Averaging Plan's requirements and shall make these records and information available to the Department upon request. The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E). **[Reference: COMAR 26.11.01.11A(2) and COMAR 26.11.01.11E]**

Quarterly reports will be submitted within 30 days of the end of each reporting quarter summarizing compliance with the Averaging Plan. **[Reference: Consent Agreement dated April 8, 2021]**

The Permittee shall submit quarterly emission reports of CEM data to the Department on or before the thirtieth day of the month following the end of each calendar quarter." **[Reference: COMAR 26.11.09.08K(1)]**

The Permittee shall comply with the reporting requirements of COMAR 26.11.01.11E. (Record Keeping and Reporting Requirements). **[Reference: COMAR 26.11.01.11E]**

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**Emissions Units: FSC-BS-Unit1 & FSC-BS-Unit2; FSC-HAW-Unit1 & FSC-HAW-Unit4; FSC-HAW-Unit2 & FSC-HAW-Unit3 (Cont'd)**

**MACT Requirements-Subpart UUUUU:** These boilers are subject to the requirements of 40 CFR Part 63 Subpart UUUUU-National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units

**Please Note:** On June 29, 2015, the Supreme Court issued an opinion in *Michigan et al v. Environmental Protection Agency*. The Supreme Court's decision remands the MATS rule to EPA and returns the matter to the U.S. Court of Appeals for the D.C. Circuit for further proceedings. As of the issuance of this permit, the MATS rule is in effect. The

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Supreme Court decision in *Michigan* requires the EPA to undertake additional proceedings for the limited purpose of evaluating costs for its “appropriate and necessary” finding which preceded the MATS rule.

On December 27, 2018, EPA issued a proposed revised Supplemental Cost Finding for the Mercury and Air Toxics Standards, as well as the Clean Air Act required “risk and technology review.” After taking account of both the cost to coal- and oil-fired power plants of complying with the MATS rule (costs that range from \$7.4 to \$9.6 billion annually) and the benefits attributable to regulating hazardous air pollutant (HAP) emissions from these power plants (quantifiable benefits that range from \$4 to \$6 million annually), as EPA was directed to do by the United States Supreme Court, the Agency proposes to determine that it is not “appropriate and necessary” to regulate HAP emissions from power plants under Section 112 of the Clean Air Act.

**On October 4, 2019** EPA sent the revised Supplemental Cost Finding and Residual Risk and Technology Review to the Office of Management and Budget for review. *This is typically the last step before the final rule is released.*

**On July 17, 2020**, the U.S. Environmental Protection Agency (EPA) finalized revisions to the electronic reporting requirements for the Mercury and Air Toxics Standards (MATS). This final action revises and streamlines those requirements, increases data transparency by requiring use of one electronic reporting system - the Emissions Collection and Monitoring Plan System (ECMPS) Client Tool - instead of two separate systems and provides enhanced access to MATS data. No new monitoring requirements are imposed by this final action. This final action also extends the current deadline for alternative electronic data submission via portable document format (PDF) files through December 31, 2023.

Until and unless the MATS rule is stayed and/or vacated by the D.C. Circuit, MATS related conditions in the Title V permit apply. If the MATS rule is stayed and/or vacated or partially stayed and/or vacated, then the affected conditions in the Title V permit will be revised/removed accordingly.

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel-fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site. **[MDE Reg. Nos. 3-0015 & 3-0016]** *(Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).* **Will be Limited-use boilers upon completion of fuel switch.**

**FSC-HAW-Unit1:** H.A. Wagner Unit 1 is a residual oil or natural gas fired unit **[5-0469]**

***FSC-HAW-Unit1 operates as a limited use liquid oil fired unit and is only subject to tune-up requirements.***

*Limited-use liquid oil-fired subcategory* means an oil-fired electric utility steam generating unit with an annual capacity factor of less than 8 percent of its maximum or nameplate heat input, whichever is greater, averaged over a 24-month block contiguous period commencing **[Reference: §63.10042].**

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**FSC-HAW-Unit4:** H.A. Wagner Unit 4 is a residual oil-fired unit with natural gas fired used for start-up. [MDE Reg. No. 4-0017].

**FSC-HAW- Unit4 operates as limited-use liquid oil-fired unit and is only subject to tune-up requirements.**

*Limited-use liquid oil-fired subcategory* means an oil-fired electric utility steam generating unit with an annual capacity factor of less than 8 percent of its maximum or nameplate heat input, whichever is greater, averaged over a 24-month block contiguous period commencing [Reference: §63.10042]

**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. [MDE Reg. No. 3-0003] (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*). **Will be a Limited-use boiler upon completion of fuel switch.**

Compliance Status:

During January 22, 2020, Compliance Evaluation of Wagner Units 1 & 4, the results are as follows:

**FSC-HAW-Unit4**, limited use oil fired boiler, tune-up was completed July 27, 2018. Fuel usage records are maintained by calendar quarter in order to document that the capacity factor limitation for “limited use” continues to be applicable.

The burner inspection was performed on October 5-6, 2015. The Department granted an extension for the combustion tune up, which was performed on January 7, 2016.

The results of MATS compliance testing are as follows:

Source	Date	Particulate (PM) (lb./MMBtu)	MATS Limit (lb./MMBtu)
FSC-HAW-Unit3	July 27 & 28, 2021	0.015	0.03
FSC-HAW-Unit3	July 29, 2020	0.009	0.03

Source	Date	HCl (lb./MMBtu)	MATS Limit (lb./MMBtu)
FSC-BS-Unit 1	Jun 23, 2022	9.70E-05	2.0E-3
FSC-BS-Unit 1	Jun 30, 2021	0.00008	0.002
FSC-BS-Unit 1	Jan 28, 2021	0.00029	0.002
FSC-BS-Unit 1	Dec 2, 2020	0.00008	0.002
FSC-BS-Unit 2	Jun 15, 2022	1.18E-04	2.0E-3
FSC-BS-Unit 2	Jun 16, 2021	0.00008	0.002
FSC-BS-Unit 2	Dec 10, 2020	0.00008	0.002

For Mercury (Hg): CEMS are used to demonstrate compliance with the 1.2 lb./TBTU mercury emission limit. Compliance via mercury CEMS is achieved if the arithmetic average of 30-boiler operating days of CEMS data meets the mercury limit. Data for HCl averaging and Hg averaging are included with the report and demonstrate compliance with MATS limits.

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**Applicable Standards and Limitations:**

**Control of HAP Emissions**

**40 CFR Part 63, Subpart UUUUU—National Emission Standards for Hazardous Air Pollutants: Coal and Oil-Fired Electric Utility Steam Generating Units.**

**§63.9980 - What is the purpose of this subpart?**

This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from coal- and oil-fired electric utility steam generating units (EGUs) as defined in §63.10042 of this subpart. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

*Electric utility steam generating unit (EGU) means a fossil fuel-fired combustion unit of more than 25 megawatts electric (MWe) that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 MWe output to any utility power distribution system for sale is considered an electric utility steam generating unit.*

**§63.9981 - Am I subject to this subpart?**

“You are subject to this subpart if you own or operate a **coal-fired EGU** or an **oil-fired EGU** as defined in §63.10042 of this subpart.”

**§63.9984 - When do I have to comply with this subpart?**

“(b) If you have an **existing EGU**, you must comply with this subpart no later than **April 16, 2015**.”

“(c) You must meet the notification requirements in §63.10030 according to the schedule in §63.10030 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.”

“(f) You must demonstrate that compliance has been achieved, by conducting the required performance tests and other activities, no later than 180 days after the applicable date in paragraph (a), (b), (c), (d), or (e) of this section.”

**§63.9991 - What emission limitations, work practice standards, and operating limits must I meet?**

“(a) You must meet the requirements in paragraphs (a)(1) and (2) of this section. You must meet these requirements at all times.

(1) You must meet each emission limit and work practice standard in Table 1 through 3 to this subpart that applies to your EGU, for each EGU at your source, except as provided under §63.10009.

(2) You must meet each operating limit in Table 4 to this subpart that applies to your EGU.

(b) As provided in §63.6(g), the Administrator may approve use of an alternative to the work practice standards in this section.

(c) You may use the alternate SO<sub>2</sub> limit in Tables 1 and 2 to this subpart only if your EGU:

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(1) Has a system using wet or dry flue gas desulfurization technology and SO<sub>2</sub> continuous emissions monitoring system (CEMS) installed on the EGU; and  
(2) At all times, you operate the wet or dry flue gas desulfurization technology and the SO<sub>2</sub> CEMS installed on the EGU consistent with §63.10000(b).”

**Table 2 to Subpart UUUUU of Part 63—Emission Limits for Existing EGUs**

As stated in §63.9991, you must comply with the following applicable emission limits:<sup>1</sup>

If your EGU is in this subcategory	For the following pollutants	You must meet the following emission limits and work practice standards	Using these requirements, as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in Table 5
1. Coal-fired unit not low rank virgin coal <b>BS-Unit1 &amp; BS-Unit2 HAW-Unit3</b>	a. Filterable particulate matter ( <b>PM</b> )	3.0E-2 lb./MMBtu or 3.0E-1 lb./MWh. <sup>2</sup>	Collect a minimum of 1 dscm per run. <b>Please Note: PM CEMs will be used for FSC-BS-Units1&amp;2</b>
	b. Hydrogen chloride ( <b>HCl</b> )	2.0E-3 lb./MMBtu or 2.0E-2 lb./MWh.	For Method 26A, collect a minimum of 0.75 dscm per run; for Method 26, collect a minimum of 120 liters per run.
			For ASTM D6348-03 <sup>3</sup> or Method 320, sample for a minimum of 1 hour.
	c. Mercury ( <b>Hg</b> )	1.2E0 lb./TBtu or 1.3E-2 lb./GWh	<b>Hg CEMS.</b>

<sup>1</sup>For LEE emissions testing for total PM, total HAP metals, individual HAP metals, HCl, and HF, the required minimum sampling volume must be increased nominally by a factor of two.

<sup>2</sup>Gross output.

<sup>3</sup>Incorporated by reference, see §63.14.

<sup>4</sup>You may not use the alternate SO<sub>2</sub> limit if your EGU does not have some form of FGD system and SO<sub>2</sub> CEMS installed.

**General Compliance Requirements**

**§63.10000 - What are my general requirements for complying with this subpart?**

“(a) You must be in compliance with the emission limits and operating limits in this subpart. These limits apply to you at all times except during periods of startup and shutdown; however, for **coal-fired, liquid oil-fired**, or solid oil-derived fuel-fired EGUs, you are required to meet the work practice requirements, items 3 and 4, in Table 3 to this subpart during periods of startup or shutdown.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance



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procedures are being used will be based on information available to the EPA Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.”

“(c)(1) For **coal-fired** units, IGCC units, and solid oil-derived fuel-fired units, initial performance testing is required for all pollutants, to demonstrate compliance with the applicable emission limits.

(i) For a **coal-fired** or solid oil-derived fuel-fired EGU or IGCC EGU, you may conduct the initial performance testing in accordance with §63.10005(h), to determine whether the EGU qualifies as a low emitting EGU (LEE) for one or more applicable emissions limits, except as otherwise provided in paragraphs (c)(1)(i)(A) and (B) of this section;

(A) Except as provided in paragraph (c)(1)(i)(C) of this section, you may not pursue the LEE option if your coal-fired, IGCC, or solid oil-derived fuel-fired EGU is equipped with a main stack and a bypass stack or bypass duct configuration that allows the effluent to bypass any pollutant control device

(B) You may not pursue the LEE option for Hg if your coal-fired, solid oil-derived fuel-fired EGU or IGCC EGU is new.

(ii) *Not Applicable*

(iii) *Not Applicable.*

(iv) If your **coal-fired** or solid oil derived fuel-fired EGU or IGCC EGU does not qualify as a LEE for total non-mercury HAP metals, individual non-mercury HAP metals, or filterable particulate matter (PM), you must demonstrate compliance through an initial performance test and you must monitor continuous performance through either use of a particulate matter continuous parametric monitoring system (PM CPMS), **a PM CEMS**, or, for an existing EGU, compliance performance testing repeated quarterly.

(v) If your **coal-fired** or solid oil-derived fuel-fired EGU does not qualify as a LEE for hydrogen chloride (HCl), you may demonstrate initial and continuous compliance through use of an HCl CEMS, installed and operated in accordance with Appendix B to this subpart. As an alternative to HCl CEMS, you may demonstrate initial and continuous compliance by conducting an initial and periodic quarterly performance stack test for HCl. **If your EGU uses wet or dry flue gas desulfurization technology (this includes limestone injection into a fluidized bed combustion unit), you may apply a second alternative to HCl CEMS by installing and operating a sulfur dioxide (SO<sub>2</sub>) CEMS installed and operated in accordance with part 75 of this chapter to demonstrate compliance with the applicable SO<sub>2</sub> emissions limit.**

(vi) If your coal-fired or solid oil-derived fuel-fired EGU does not qualify as a LEE for Hg, you must demonstrate initial and continuous compliance through use of a Hg CEMS or a sorbent trap monitoring system, in accordance with appendix A to this subpart.

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- (A) *Not Applicable.*  
(B) *Not Applicable.*”

“(c)(2) For **liquid oil-fired EGUs**, except limited use liquid oil-fired EGUs, initial performance testing is required for all pollutants, to demonstrate compliance with the applicable emission limits.

(i) For an **existing liquid oil-fired unit**, you may conduct the performance testing in accordance with §63.10005(h), to determine whether the unit qualifies as a LEE for one or more pollutants. For a qualifying LEE for Hg emissions limits, you must conduct a 30-day performance test using Method 30B at least once every 12 calendar months to demonstrate continued LEE status. For a qualifying LEE of any other applicable emissions limits, you must conduct a performance test at least once every 36 calendar months to demonstrate continued LEE status.

(ii) If your liquid oil-fired unit does not qualify as a LEE for total HAP metals (including mercury), individual metals (including mercury), or filterable PM you must demonstrate compliance through an initial performance test and you must monitor continuous performance through either use of a PM CPMS, a PM CEMS, or, for an existing EGU, performance testing conducted quarterly.

(iii) If your existing liquid oil-fired unit does not qualify as a LEE for hydrogen chloride (HCl) or for hydrogen fluoride (HF), you may demonstrate initial and continuous compliance through use of an HCl CEMS, an HF CEMS, or an HCl and HF CEMS, installed and operated in accordance with Appendix B to this rule. As an alternative to HCl CEMS, HF CEMS, or HCl and HF CEMS, you may demonstrate initial and continuous compliance through periodic quarterly performance testing and parametric monitoring for HCl and HF. If you choose to use quarterly performance testing and parametric monitoring, then you must also develop a site-specific monitoring plan that identifies the CMS you will use to ensure that the operations of the EGU remains consistent with those during the performance test. As another alternative, you may measure or obtain, and keep records of, fuel moisture content; as long as fuel moisture does not exceed 1.0 percent by weight, you need not conduct other HCl or HF monitoring or testing.

**(iv) If your unit qualifies as a limited-use liquid oil-fired as defined in §63.10042, then you are not subject to the emission limits in Tables 1 and 2, but you must comply with the performance tune-up work practice requirements in Table 3. (This applies to FSC-HAW-Unit4; and upon completion of fuel switch to FSC-HW-Unit3, FSC-BS-Unit1 & FSC-BS-Unit2)**

“(d)(1) If you demonstrate compliance with any applicable emissions limit through use of a continuous monitoring system (CMS), where a CMS includes a continuous parameter monitoring system (CPMS) as well as a **continuous emissions monitoring system (CEMS)**, you must develop a site-specific monitoring plan and submit this site-specific monitoring plan, if requested, at

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least 60 days before your initial performance evaluation (where applicable) of your CMS. This requirement also applies to you if you petition the Administrator for alternative monitoring parameters under §63.8(f). This requirement to develop and submit a site-specific monitoring plan does not apply to affected sources with existing monitoring plans that apply to CEMS and CPMS prepared under appendix B to part 60 or part 75 of this chapter, and that meet the requirements of §63.10010. Using the process described in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in this paragraph of this section and, if approved, include those in your site-specific monitoring plan. The monitoring plan must address the provisions in paragraphs (d)(2) through (5) of this section.

(2) The site-specific monitoring plan shall include the information specified in paragraphs (d)(5)(i) through (d)(5)(vii) of this section. Alternatively, the requirements of paragraphs (d)(5)(i) through (d)(5)(vii) are considered to be met for a particular CMS or sorbent trap monitoring system if:

(i) The CMS or sorbent trap monitoring system is installed, certified, maintained, operated, and quality-assured either according to part 75 of this chapter, or appendix A or B to this subpart; and

(ii) The recordkeeping and reporting requirements of part 75 of this chapter, or appendix A or B to this subpart that pertain to the CMS are met.

(3) If requested by the Administrator, you must submit the monitoring plan (or relevant portion of the plan) at least 60 days before the initial performance evaluation of a particular CMS, except where the CMS has already undergone a performance evaluation that meets the requirements of §63.10010 (e.g., if the CMS was previously certified under another program).

(4) You must operate and maintain the CMS according to the site-specific monitoring plan.

(5) The provisions of the site-specific monitoring plan must address the following items:

(i) Installation of the CMS or sorbent trap monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device). See §63.10010(a) for further details. For PM CPMS installations, follow the procedures in §63.10010(h).

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems.

(iii) Schedule for conducting initial and periodic performance evaluations.

(iv) Performance evaluation procedures and acceptance criteria (e.g., calibrations), including the quality control program in accordance with the general requirements of §63.8(d).

(v) On-going operation and maintenance procedures, in accordance with the general requirements of §§63.8(c)(1)(ii), (c)(3), and (c)(4)(ii).

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(vi) Conditions that define a CMS that is out of control consistent with §63.8(c)(7)(i) and for responding to out-of-control periods consistent with §§63.8(c)(7)(ii) and (c)(8).

(vii) On-going recordkeeping and reporting procedures, in accordance with the general requirements of §§63.10(c), (e)(1), and (e)(2)(i), or as specifically required under this subpart.”

“(e) As part of your demonstration of continuous compliance, you must perform periodic tune-ups of your EGU(s), according to §63.10021(e).”

“(j) All air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of operations that cause your EGU to meet the definition of an EGU subject to this subpart must be installed and operational as of the date your source ceases to be or becomes subject to this subpart.”

“(k) All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of operations that cause your EGU to meet the definition of an EGU subject to this subpart must be installed and operational as of the date your source ceases to be or becomes subject to this subpart. All calibration and drift checks must be performed as of the date your source ceases to be or becomes subject to this subpart. You must also comply with provisions of §§63.10010, 63.10020, and 63.10021 of this subpart. Relative accuracy tests must be performed as of the performance test deadline for PM CEMS, if applicable. Relative accuracy testing for other CEMS need not be repeated if that testing was previously performed consistent with CAA section 112 monitoring requirements or monitoring requirements under this subpart.”

“(l) On or before the date an EGU is subject to this subpart, you must install, certify, operate, maintain, and quality assure each monitoring system necessary for demonstrating compliance with the work practice standards for PM or non-mercury HAP metals during startup periods and shutdown periods. You must collect, record, report, and maintain data obtained from these monitoring systems during startup periods and shutdown periods.”

**Table 3 to Subpart UUUUU of Part 63—Work Practice Standards**

As stated in §§63.9991, you must comply with the following applicable work practice standards:

<b>If your EGU is:</b>	<b>You must meet the following:</b>
1. An <b>existing</b> EGU	Conduct a tune-up of the EGU burner and combustion controls at least each 36 calendar months, or each 48 calendar months if neural network combustion optimization software is employed, as specified in §63.10021(e).

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<p>3. A <b>coal-fired, liquid oil-fired</b> (excluding limited-use liquid oil-fired subcategory units), or solid oil-derived fuel-fired EGU <b>during startup</b></p> <p><b>BS-Unit1 &amp; BS-Unit2 HAW-Unit3 will comply with paragraph (1).</b></p>	<p>You have the option of complying using either of the following work practice standards.</p> <p>(1) If you choose to comply using paragraph (1) of the definition of “startup” in §63.10042, you must operate all CMS during startup. Startup means either the first-ever firing of fuel in a boiler for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on site use). For startup of a unit, you must use clean fuels as defined in §63.10042 for ignition. Once you convert to firing coal, residual oil, or solid oil-derived fuel, you must engage all of the applicable control technologies except dry scrubber and SCR systems. You must start your dry scrubber and SCR systems, if present, appropriately to comply with relevant standards applicable during normal operation. You must comply with all applicable emissions limits at all times except for periods that meet the applicable definitions of startup and shutdown in this subpart. You must keep records during startup periods. You must provide reports concerning activities and startup periods, as specified in §63.10011(g) and §63.10021(h) and (i).</p>
	<p>(2) If you choose to comply using paragraph (2) of the definition of “startup” in §63.10042, you must operate all CMS during startup. You must also collect appropriate data, and you must calculate the pollutant emission rate for each hour of startup.</p>
	<p>For startup of an EGU, you must use one or a combination of the clean fuels defined in §63.10042 to the maximum extent possible, taking into account considerations such as boiler or control device integrity, throughout the startup period. You must have sufficient clean fuel capacity to engage and operate your PM control device within one hour of adding coal, residual oil, or solid oil-derived fuel to the unit. You must meet the startup period work practice requirements as identified in §63.10020(e).</p>
	<p>Once you start firing coal, residual oil, or solid oil-derived fuel, you must vent emissions to the main stack(s). You must comply with the applicable emission limits beginning with the hour after startup ends. You must engage and operate your particulate matter control(s) within 1 hour of first firing of coal, residual oil, or solid oil-derived fuel.</p>
	<p>You must start all other applicable control devices as expeditiously as possible, considering safety and manufacturer/supplier recommendations, but, in any case, when necessary to comply with other standards made applicable to the EGU by a permit limit or a rule other than this Subpart that require operation of the control devices.</p>
	<p>...You must collect monitoring data during startup periods, as specified in §63.10020(a) and (e). You must keep records during startup periods, as provided in §§63.10032 and 63.10021(h). You</p>

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	must provide reports concerning activities and startup periods, as specified in §§63.10011(g), 63.10021(i), and 63.10031.
4. A <b>coal-fired, liquid oil-fired</b> (excluding limited-use liquid oil-fired subcategory units), or solid oil-derived fuel-fired EGU <b>during shutdown</b>	<p>You must operate all CMS during shutdown. You must also collect appropriate data, and you must calculate the pollutant emission rate for each hour of shutdown for those pollutants for which a CMS is used.</p> <p>While firing coal, residual oil, or solid oil-derived fuel during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices and continue to operate those control devices after the cessation of coal, residual oil, or solid oil-derived fuel being fed into the EGU and for as long as possible thereafter considering operational and safety concerns. In any case, you must operate your controls when necessary to comply with other standards made applicable to the EGU by a permit limit or a rule other than this Subpart and that require operation of the control devices.</p>
	If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the clean fuels defined in §63.10042 and must be used to the maximum extent possible, taking into account consideration such as not compromising boiler or control device integrity.
	You must comply with all applicable emission limits at all times except during startup periods and shutdown periods at which time you must meet this work practice. You must collect monitoring data during shutdown periods, as specified in §63.10020(a). You must keep records during shutdown periods, as provided in §§63.10032 and 63.10021(h). Any fraction of an hour in which shutdown occurs constitutes a full hour of shutdown. You must provide reports concerning activities and shutdown periods, as specified in §§63.10011(g), 63.10021(i), and 63.10031.

**§63.10009 - May I use emissions averaging to comply with this subpart?**

“(a) *General eligibility.* (1) You may use emissions averaging as described in paragraph (a)(2) of this section as an alternative to meeting the requirements of §63.9991 for filterable PM, SO<sub>2</sub>, HF, HCl, non-Hg HAP metals, or Hg on an EGU-specific basis if:

- (i) You have more than one existing EGU in the same subcategory located at one or more contiguous properties, belonging to a single major industrial grouping, which are under common control of the same person (or persons under common control); and
- (ii) You use CEMS (or sorbent trap monitoring systems for determining Hg emissions) or quarterly emissions testing for demonstrating compliance.

(2) You may demonstrate compliance by emissions averaging among the existing EGUs in the same subcategory, if your averaged Hg emissions for EGUs

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in the “unit designed for coal ≥8,300 Btu/lb.” subcategory are equal to or less than 1.2 lb./TBtu or 1.3E-2 lb./GWh on a 30-boiler operating day basis or if your averaged emissions of individual, other pollutants from other subcategories of such EGUs are equal to or less than the applicable emissions limit in Table 2 to this subpart, according to the procedures in this section. Note that except for Hg emissions from EGUs in the “unit designed for coal ≥8,300 Btu/lb.” subcategory, the averaging time for emissions averaging for pollutants is 30 days (rolling daily) using data from CEMS or a combination of data from CEMS and manual performance (LEE) testing. The averaging time for emissions averaging for the alternate Hg limit (equal to or less than 1.0 lb./TBtu or 1.1E-2 lb./GWh) from EGUs in the “unit designed for coal ≥8,300 Btu/lb.” subcategory is 90- boiler operating days (rolling daily) using data from CEMS, sorbent trap monitoring, or a combination of monitoring data and data from manual performance (LEE) testing. For the purposes of this paragraph, 30- (or 90-day) group boiler operating days is defined as a period during which at least one unit in the emissions averaging group operates on each of the 30 or 90 days. You must calculate the weighted average emissions rate for the group in accordance with the procedures in this paragraph using the data from all units in the group including any that operate fewer than 30 (or 90) days during the preceding 30 (or 90) group boiler days.

- (i) You may choose to have your EGU emissions averaging group meet either the heat input basis (MMBtu or TBtu, as appropriate for the pollutant) or gross electrical output basis (MWh or GWh, as appropriate for the pollutant).
- (ii) You may not mix bases within your EGU emissions averaging group.
- (iii) You may use emissions averaging for affected units in different subcategories if the units vent to the atmosphere through a common stack (see paragraph (m) of this section).

(b) *Equations.* Use the following equations when performing calculations for your EGU emissions averaging group:

(1) Group eligibility equations.

$$WAER_m = \frac{[\sum_{j=1}^p Herm_j \times Rmm_j] + \sum_{k=1}^m Ter_k \times Rmt_k}{(\sum_{j=1}^p Rmm_j) + \sum_{k=1}^m Rmt_k} \quad (Eq. 1a)$$

Where:

WAER<sub>m</sub> = Maximum Weighted Average Emission Rate in terms of lb/heat input or lb/gross output,

Herm<sub>ij</sub> = hourly emission rate (e.g., lb/MMBtu, lb/MWh) from CEMS or sorbent trap monitoring as determined during the initial compliance determination from EGU j,

Rmm<sub>j</sub> = Maximum rated heat input, MMBtu/h, or maximum rated gross output, MWh/h, for EGU j,

p = number of EGUs in emissions averaging group that rely on CEMS,

Ter<sub>k</sub> = Emissions rate (lb/MMBTU or lb/MWh) as determined during the initial compliance determination of EGU k,

Rmt<sub>k</sub> = Maximum rated heat input, MMBtu/h, or maximum rated gross output, MWh/h, for EGU k, and

m = number of EGUs in emissions averaging group that rely on emissions testing.

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$$WAER_m = \frac{\sum \left[ \left( \sum_{j=1}^p Her_{i,j} \right) \times Smm_j \times Cfm_j \right] + \sum_{k=1}^m Ter_k \times Smt_k \times Cft_k}{\sum \left[ \sum_{j=1}^p Smm_j \times Cfm_j \right] + \sum_{k=1}^m Smt_k \times Cft_k} \quad (Eq. 1b)$$

Where:

Variables with the similar names share the descriptions for Equation 1a of this section,  
 Smm<sub>j</sub> = maximum steam generation, lb<sub>steam</sub>/h or lb/gross output, for EGU j,  
 Cfm<sub>j</sub> = conversion factor, calculated from the most recent compliance test results, in terms units of heat output or gross output per pound of steam generated (MMBtu/lb<sub>steam</sub> or MWh/lb<sub>steam</sub>) from EGU j,  
 Smt<sub>k</sub> = maximum steam generation, lb<sub>steam</sub>/h or lb/gross output, for EGU k, and  
 Cfm<sub>k</sub> = conversion factor, calculated from the most recent compliance test results, in terms units of heat output or gross output per pound of steam generated (MMBtu/lb<sub>steam</sub> or MWh/lb<sub>steam</sub>) from EGU k.  
 (2) Weighted 30-boiler operating day rolling average emissions rate equations for pollutants other than Hg. Use Equation 2a or 2b of this section to calculate the 30 day rolling average emissions daily.

$$WAER = \frac{\sum_{i=1}^p \left[ \sum_{j=1}^n (Her_j \times Rm_j) \right]_p + \sum_{i=1}^m (Ter_i \times Rt_i)}{\sum_{i=1}^p \left[ \sum_{j=1}^n (Rm_j) \right]_p + \sum_{i=1}^m Rt_i} \quad (Eq. 2a)$$

Where:

Her<sub>i</sub> = hourly emission rate (e.g., lb/MMBtu, lb/MWh) from unit i's CEMS for the preceding 30-group boiler operating days,  
 Rm<sub>i</sub> = hourly heat input or gross output from unit i for the preceding 30-group boiler operating days,  
 p = number of EGUs in emissions averaging group that rely on CEMS or sorbent trap monitoring,  
 n = number of hours that hourly rates are collected over 30-group boiler operating days,  
 Ter<sub>i</sub> = Emissions rate from most recent emissions test of unit i in terms of lb/heat input or lb/gross output,  
 Rt<sub>i</sub> = Total heat input or gross output of unit i for the preceding 30-boiler operating days, and  
 m = number of EGUs in emissions averaging group that rely on emissions testing.

$$WAER = \frac{\sum_{i=1}^p \left[ \sum_{j=1}^n (Her_j \times Sm_j \times Cfm_j) \right]_p + \sum_{i=1}^m (Ter_i \times St_i \times Cft_i)}{\sum_{i=1}^p \left[ \sum_{j=1}^n (Sm_j \times Cfm_j) \right]_p + \sum_{i=1}^m St_i \times Cft_i} \quad (Eq. 2b)$$

Where:

variables with similar names share the descriptions for Equation 2a of this section,  
 Sm<sub>i</sub> = steam generation in units of pounds from unit i that uses CEMS for the preceding 30-group boiler operating days,  
 Cfm<sub>i</sub> = conversion factor, calculated from the most recent compliance test results, in units of heat input per pound of steam generated or gross output per pound of steam generated, from unit i that uses CEMS from the preceding 30 group boiler operating days,  
 St<sub>i</sub> = steam generation in units of pounds from unit i that uses emissions testing, and  
 Cft<sub>i</sub> = conversion factor, calculated from the most recent compliance test results, in units of heat input per pound of steam generated or gross output per pound of steam generated, from unit i that uses emissions testing.

(3) Weighted 90-boiler operating day rolling average emissions rate equations for Hg emissions from EGUs in the "coal-fired unit not low rank virgin coal" subcategory. Use Equation 3a or 3b of this section to calculate the 90-day rolling average emissions daily.

$$WAER = \frac{\sum_{i=1}^p \left[ \sum_{j=1}^n (Her_j \times Rm_j) \right]_p + \sum_{i=1}^m (Ter_i \times Rt_i)}{\sum_{i=1}^p \left[ \sum_{j=1}^n (Rm_j) \right]_p + \sum_{i=1}^m Rt_i} \quad (Eq. 3a)$$

Where:

Her<sub>i</sub> = hourly emission rate from unit i's CEMS or Hg sorbent trap monitoring system for the preceding 90-group boiler operating days,



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R<sub>m</sub> = hourly heat input or gross output from unit i for the preceding 90-group boiler operating days,  
 p = number of EGUs in emissions averaging group that rely on CEMS,  
 n = number of hours that hourly rates are collected over the 90-group boiler operating days,  
 Ter<sub>i</sub> = Emissions rate from most recent emissions test of unit i in terms of lb/heat input or lb/gross output,  
 Rt = Total heat input or gross output of unit i for the preceding 90-boiler operating days, and  
 m = number of EGUs in emissions averaging group that rely on emissions testing.

$$WAER = \frac{\sum_{i=1}^p [\sum_{j=1}^n (Her_j \times Sm_i \times Cfm_j)]_p + \sum_{i=1}^m (Ter_i \times St_i \times Cft_i)}{\sum_{i=1}^p [\sum_{j=1}^n (Sm_j \times Cfm_j)]_p + \sum_{i=1}^m (St_i \times Cft_i)} \quad (Eq. 3b)$$

Where:

variables with similar names share the descriptions for Equation 2a of this section,

Sm<sub>i</sub> = steam generation in units of pounds from unit i that uses CEMS or a Hg sorbent trap monitoring for the preceding 90-group boiler operating days,

Cfm<sub>i</sub> = conversion factor, calculated from the most recent compliance test results, in units of heat input per pound of steam generated or gross output per pound of steam generated, from unit i that uses CEMS or sorbent trap monitoring from the preceding 90-group boiler operating days,

St<sub>i</sub> = steam generation in units of pounds from unit i that uses emissions testing, and

Cft<sub>i</sub> = conversion factor, calculated from the most recent emissions test results, in units of heat input per pound of steam generated or gross output per pound of steam generated, from unit i that uses emissions testing.

(c) *Separate stack requirements.* For a group of two or more existing EGUs in the same subcategory that each vent to a separate stack, you may average filterable PM, SO<sub>2</sub>, HF, HCl, non-Hg HAP metals, or Hg emissions to demonstrate compliance with the limits in Table 2 to this subpart if you satisfy the requirements in paragraphs (d) through (j) of this section.

(d) For each existing EGU in the averaging group:

(1) The emissions rate achieved during the initial performance test for the HAP being averaged must not exceed the emissions level that was being achieved 180 days after April 16, 2015, or the date on which emissions testing done to support your emissions averaging plan is complete (if the Administrator does not require submission and approval of your emissions averaging plan), or the date that you begin emissions averaging, whichever is earlier; or

(2) The control technology employed during the initial performance test must not be less than the design efficiency of the emissions control technology employed 180 days after April 16, 2015 or the date that you begin emissions averaging, whichever is earlier.

(e) The weighted-average emissions rate from the existing EGUs participating in the emissions averaging option must be in compliance with the limits in Table 2 to this subpart at all times following the date that you begin emissions averaging.

(f) Emissions averaging group eligibility demonstration. You must demonstrate the ability for the EGUs included in the emissions averaging group to demonstrate initial compliance according to paragraph (f)(1) or (2) of this section

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using the maximum rated heat input or gross output over a 30- (or 90-) boiler operating day period of each EGU and the results of the initial performance tests. For this demonstration and prior to preparing your emissions averaging plan, if requested, you must conduct required emissions monitoring for 30- (or 90 -) days of boiler operation and any required manual performance testing to calculate maximum weighted average emissions rate in accordance with this section. If, before the start of your initial compliance demonstration, the Administrator becomes aware that you intend to use emissions averaging for that demonstration or if your Notification of Compliance Status (NOCS) indicates that you intend to implement emissions averaging at a future date, the Administrator may require you to submit your proposed emissions averaging plan and supporting data for approval. If the Administrator requires approval of your plan, you may not begin using emissions averaging until the Administrator approves your plan.

(1) You must use Equation 1a in paragraph (b) of this section to demonstrate that the maximum weighted average emissions rates of filterable PM, HF, SO<sub>2</sub>, HCl, non-Hg HAP metals, or Hg emissions from the existing units participating in the emissions averaging option do not exceed the emissions limits in Table 2 to this subpart.

(2) If you are not capable of monitoring heat input or gross output, and the EGU generates steam for purposes other than generating electricity, you may use Equation 1b of paragraph (b) of this section as an alternative to using Equation 1a of paragraph (b) of this section to demonstrate that the maximum weighted average emissions rates of filterable PM, HF, SO<sub>2</sub>, HCl, non-Hg HAP metals, or Hg emissions from the existing units participating in the emissions averaging group do not exceed the emission limits in Table 2 to this subpart.

(g) You must determine the weighted average emissions rate in units of the applicable emissions limit on a 30-group boiler operating day rolling average basis (or, if applicable, on a 90-group boiler operating day rolling average for Hg) according to paragraphs (g)(1) and (2) of this section. The first averaging period begins on 30<sup>th</sup> (or, if applicable, 90<sup>th</sup> for the alternate Hg emission limit) group boiler operating day after the date that you begin emissions averaging.

(1) You must use Equation 2a or 3a of paragraph (b) of this section to calculate the weighted average emissions rate using the actual heat input or gross output for each existing unit participating in the emissions averaging option.

(2) If you are not capable of monitoring heat input or gross output, you may use Equation 2b or 3b of paragraph (b) of this section as an alternative to using Equation 2a of paragraph (b) of this section to calculate the average weighted emission rate using the actual steam generation from the units participating in the emissions averaging option.

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(h) *CEMS (or sorbent trap monitoring) use.* If an EGU in your emissions averaging group uses CEMS (or a sorbent trap monitor for Hg emissions) to demonstrate compliance, you must use those data to determine the 30 (or 90) group boiler operating day rolling average emissions rate.

(i) *Emissions testing.* If you use manual emissions testing to demonstrate compliance for one or more EGUs in your emissions averaging group, you must use the results from the most recent performance test to determine the 30 (or 90) day rolling average. You may use CEMS or sorbent trap data in combination with data from the most recent manual performance test in calculating the 30 (or 90) group boiler operating day rolling average emissions rate.

(j) *Emissions averaging plan.* You must develop an implementation plan for emissions averaging according to the following procedures and requirements in paragraphs (j)(1) and (2) of this section.

(1) You must include the information contained in paragraphs (j)(1)(i) through (v) of this section in your implementation plan for all the emissions units included in an emission averaging:

(i) The identification of all existing EGUs in the emissions averaging group, including for each either the applicable HAP emission level or the control technology installed as of 180 days after February 16, 2015, or the date on which you complete the emissions measurements used to support your emissions averaging plan (if the Administrator does not require submission and approval of your emissions averaging plan), or the date that you begin emissions averaging, whichever is earlier; and the date on which you are requesting emissions averaging to commence;

(ii) The process weighting parameter (heat input, gross output, or steam generated) that will be monitored for each averaging group;

(iii) The specific control technology or pollution prevention measure to be used for each emission EGU in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple EGUs, you must identify each EGU;

(iv) The means of measurement (e.g., CEMS, sorbent trap monitoring, manual performance test) of filterable PM, SO<sub>2</sub>, HF, HCl, individual or total non-Hg HAP metals, or Hg emissions in accordance with the requirements in §63.10007 and to be used in the emissions averaging calculations; and

(v) A demonstration that emissions averaging can produce compliance with each of the applicable emission limit(s) in accordance with paragraph (b)(1) of this section.

(2) If, as described in paragraph (f) of this section, the Administrator requests you to submit the plan for review and approval, you must receive approval before initiating emissions averaging.

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- (i) The Administrator shall use following criteria in reviewing and approving or disapproving the plan:
- (A) Whether the content of the plan includes all of the information specified in paragraph (j)(1) of this section; and
  - (B) Whether the plan presents information sufficient to determine that compliance will be achieved and maintained.
- (ii) The Administrator shall not approve an emission averaging implementation plan containing any of the following provisions:
- (A) Any averaging between emissions of different pollutants or between units located at different facilities; or
  - (B) The inclusion of any emissions unit other than an existing unit in the same subcategory.
- (k) *Common stack requirements.* For a group of two or more existing affected units, each of which vents through a single common stack, you may average emissions to demonstrate compliance with the limits in Table 2 to this subpart if you satisfy the requirements in paragraph (l) or (m) of this section.
- (l) For a group of two or more existing units in the same subcategory and which vent through a common emissions control system to a common stack that does not receive emissions from units in other subcategories or categories, you may treat such averaging group as a single existing unit for purposes of this subpart and comply with the requirements of this subpart as if the group were a single unit.
- (m) For all other groups of units subject to paragraph (k) of this section, you may elect to conduct manual performance tests according to procedures specified in §63.10007 in the common stack. If emissions from affected units included in the emissions averaging and from other units not included in the emissions averaging (e.g., in a different subcategory) or other nonaffected units all vent to the common stack, you must shut down the units not included in the emissions averaging and the nonaffected units or vent their emissions to a different stack during the performance test. Alternatively, you may conduct a performance test of the combined emissions in the common stack with all units operating and show that the combined emissions meet the most stringent emissions limit. You may also use a CEMS or sorbent trap monitoring to apply this latter alternative to demonstrate that the combined emissions comply with the most stringent emissions limit on a continuous basis.
- (n) *Combination requirements.* The common stack of a group of two or more existing EGUs in the same subcategory subject to paragraph (k) of this section may be treated as a single stack for purposes of paragraph (c) of this section and included in an emission averaging group subject to paragraph (c) of this section.”

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**Compliance Demonstration**

The Permittee shall demonstrate compliance for the affected unit:

<b>Emission Units</b>	<b>Tables</b>	<b>Compliance Demonstration</b>
<b>FSC-BS-Unit1 &amp; FSC-BS-Unit2</b>	Table 1	Not Applicable. Not a new or reconstructed unit
	Table 2	Compliance with Filterable PM (Coal-fired units not low rank coal) rather than Total non-Hg HAP metals or Individual HAP metals- demonstrate compliance with PM CEMS.  Compliance with HCl quarterly stack testing.  Compliance with Hg with Hg CEMS.  Averaging Plan for PM and HCl with <b>FSC-HAW-Unit3</b> .
	Table 3	Conduct a tune-up of the EGU burner and combustion controls at least each 36 calendar months, or each 48 calendar months if neural network combustion optimization software is employed, as specified in §63.10021(e). Note: neural network combustion optimization software employed.  Comply with Option 1 for work practices during start-up.  Comply with work practices during shut down.
	Table 4	Not applicable. No PM CPMS.
<b>FSC-HAW-Unit3</b>	Table 1	Not Applicable. Not a new or reconstructed unit
	Table 2	Compliance with Filterable PM (Coal-fired units not low rank coal) rather than Total non-Hg HAP metals or Individual HAP metals- compliance demonstration by quarterly stack test.

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		<p>Compliance with HCl quarterly stack testing; will average with <b>FSC-BS-Units1&amp;2.</b></p> <p>Compliance with Hg with Hg CEMS.</p> <p>Submitted request to revise Averaging Plan for PM and HCl to be included with <b>FSC-BS-Units1&amp;2</b></p>												
	Table 3	<p>Conduct a tune-up of the EGU burner and combustion controls at least each 36 calendar months, or each 48 calendar months if neural network combustion optimization software is employed, as specified in §63.10021(e). <b>Note:</b> neural network combustion optimization software employed.</p> <p>Comply with Option 1 for work practices during Start-up.</p> <p>Comply with work practices during shut down.</p>												
	Table 4	Not applicable. No PM CPMS												
<b>FSC-HAW-Unit1 &amp; FSC-HAW-Unit4</b>	<p>Limited-use liquid oil-fired subcategory means an oil-fired electric utility steam generating unit with an annual capacity factor of less than 8 percent of its maximum or nameplate heat input, whichever is greater, averaged over a 24-month block contiguous period commencing April 16, 2015.</p> <p>Using the MATS Rule (40 CFR §63.10042) definition for capacity factor for a liquid oil-fired EGU (the total annual heat input from oil divided by the product of maximum hourly heat input for the EGU, regardless of fuel, multiplied by 8,760 hours), the annual heat input-based capacity factors for the period from 2012 to 2014 are as follows:</p> <table border="1" data-bbox="634 1688 1174 1875"> <thead> <tr> <th>Year</th> <th>Annual Oil Heat Input (lbs./MMBtu)</th> <th>Annual Capacity Factor, %</th> </tr> </thead> <tbody> <tr> <td>2012</td> <td>153,265</td> <td>0.6</td> </tr> <tr> <td>2013</td> <td>261,462</td> <td>0.7</td> </tr> <tr> <td>2014</td> <td>1,111,648</td> <td>3.0</td> </tr> </tbody> </table>		Year	Annual Oil Heat Input (lbs./MMBtu)	Annual Capacity Factor, %	2012	153,265	0.6	2013	261,462	0.7	2014	1,111,648	3.0
Year	Annual Oil Heat Input (lbs./MMBtu)	Annual Capacity Factor, %												
2012	153,265	0.6												
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	Table 1	Not Applicable. Not a new or reconstructed unit
	Table 2	Not Applicable- Limited use oil fired unit
	Table 3	Conduct a tune-up of the EGU burner and combustion controls at least each 36 calendar months, or each 48 calendar months if neural network combustion optimization software is employed, as specified in §63.10021(e). Note: neural network combustion optimization software employed
	Table 4	Not applicable. No PM CPMS

**Emissions Units: FSC-BS-Unit1 & FSC-BS-Unit2; FSC-HAW-Unit1 & FSC-HAW-Unit4; FSC-HAW-Unit2 & FSC-HAW-Unit3 (Cont'd)**

**Cross State Air Pollution Rule (CSAPR)**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel-fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**FSC-HAW-Unit1:** H.A. Wagner Unit 1 is a residual oil or natural gas fired unit **[MDE Reg. No. 5-0469]**

**FSC-HAW-Unit2:** H.A. Wagner Unit 2 is a natural gas unit. **[MDE Reg. No. 3-0017]**

**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. **[MDE Reg. No. 3-0003]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**FSC-HAW-Unit4:** H.A. Wagner Unit 4 is a residual oil-fired unit with natural gas fired used for start-up. **[MDE Reg. No. 4-0017]**.

Compliance Status

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During the October 8, 2019 Compliance Evaluation of the Brandon Shores, the CSAPR NO<sub>x</sub> allowance surrender rates (tons of emissions/total allowances held) were 0.46, 0.22, and 0.25 for 2016, 2017, and 2018, respectively. The CSAPR SO<sub>2</sub> allowance surrender rates were 0.94, 0.34, and 0.29 for 2016, 2017, and 2018, respectively.

**Applicable Standards and Limitations:**

**COMAR 26.11.28.02 - Requirements.**

**"A.** This chapter incorporates by reference the U.S. EPA CSAPR and the CSAPR Update, including the definitions, criteria, and procedures therein.

**B. Trading Program Requirements.**

(1) This chapter incorporates by reference provisions of the CSAPR NO<sub>x</sub> Annual Trading Program set forth in 40 CFR Part 97, Subpart AAAAA, as published July 1, 2017, and associated reference methods, performance specifications, and other test methods referenced by these standards, as applicable to existing and new units in Maryland, except the provisions at 40 CFR §97.411(b)(2) and (c)(5)(iii), 97.412(b), and 97.421(h) and (j).

(2) This chapter incorporates by reference provisions of the CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program set forth in 40 CFR Part 97, Subpart EEEEE, as published July 1, 2017, and associated reference methods, performance specifications and other test methods referenced by these standards, as applicable to existing and new units in Maryland, except the provisions at 40 CFR §§97.811(b)(2) and (c)(5)(iii), 97.812(b), and 97.821(h) and (j).

(3) This chapter incorporates by reference provisions of the CSAPR SO<sub>2</sub> Group 1 Trading Program set forth in 40 CFR Part 97, Subpart CCCCC, as published July 1, 2017, and associated reference methods, performance specifications and other test methods referenced by these standards, as applicable to existing and new units in Maryland, except the provisions at 40 CFR §§97.611(b)(2) and (c)(5)(iii), 97.612(b), and 97.621(h) and (j)."

**A. 40 CFR Part 97 Subpart AAAAA-CSAPR NO<sub>x</sub> Annual Trading Program CSAPR NO<sub>x</sub> Annual Trading Program requirements (40 CFR 97.406)**

The Permittee shall comply with the provisions and requirements of §97.401 through §97.435.

**Note: §97.406(c) NO<sub>x</sub> emissions requirements.** For CSAPR NO<sub>x</sub> Annual emissions limitation: As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO<sub>x</sub> Annual source and each CSAPR NO<sub>x</sub> Annual unit at the source shall hold, in the source's compliance account, CSAPR NO<sub>x</sub> Annual allowances available for deduction for such control period under §97.424(a) in an amount not less than the tons of total NO<sub>x</sub> emissions for such control period from all CSAPR NO<sub>x</sub> Annual units at the source.



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Allowance transfer deadline means, for a control period in a given year, midnight of March 1 (if it is a business day), or midnight of the first business day thereafter (if March 1 is not a business day), immediately after such control period and is the deadline by which a CSAPR NO<sub>x</sub> Annual allowance transfer must be submitted for recordation in a CSAPR NO<sub>x</sub> Annual source's compliance account in order to be available for use in complying with the source's CSAPR NO<sub>x</sub> Annual emissions limitation for such control period in accordance with §§97.406 and 97.424.

**B. 40 CFR Part 97 Subpart CCCCC-CSAPR SO<sub>2</sub> Group 1 Trading Program  
CSAPR SO<sub>2</sub> Group 1 Trading Program requirements (40 CFR 97.606)**

The Permittee shall comply with the provisions and requirements of §97.601 through §97.635.

**Note: §97.606(c) SO<sub>2</sub> emissions requirements.** For CSAPR SO<sub>2</sub> Group 1 emissions limitation: As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR SO<sub>2</sub> Group 1 source and each CSAPR SO<sub>2</sub> Group 1 unit at the source shall hold, in the source's compliance account, CSAPR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under §97.624(a) in an amount not less than the tons of total SO<sub>2</sub> emissions for such control period from all CSAPR SO<sub>2</sub> Group 1 units at the source.

Allowance transfer deadline means, for a control period in a given year, midnight of March 1 (if it is a business day), or midnight of the first business day thereafter (if March 1 is not a business day), immediately after such control period and is the deadline by which a CSAPR SO<sub>2</sub> Group 1 allowance transfer must be submitted for recordation in a CSAPR SO<sub>2</sub> Group 1 source's compliance account in order to be available for use in complying with the source's CSAPR SO<sub>2</sub> Group 1 emissions limitation for such control period in accordance with §§97.606 and 97.624.

**C. 40 CFR Part 97 Subpart GGGGG-CSAPR NO<sub>x</sub> Ozone Season Group 3  
Trading Program  
CSAPR NO<sub>x</sub> Ozone Season Group 3 Trading Program Requirements (40  
CFR 97.1006)**

The Permittee shall comply with the provisions and requirements of §97.1001 through §97.1035.

**Note: §97.1006(c) NO<sub>x</sub> emissions requirements.** For CSAPR NO<sub>x</sub> Ozone Season Group 3 emissions limitation: As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO<sub>x</sub> Ozone Season Group 3 source and each CSAPR NO<sub>x</sub> Ozone Season Group 3 unit at the source shall hold, in the source's compliance account, CSAPR NO<sub>x</sub>

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Ozone Season Group 3 allowances available for deduction for such control period under §97.1024(a) in an amount not less than the tons of total NO<sub>x</sub> emissions for such control period from all CSAPR NO<sub>x</sub> Ozone Season Group 3 units at the source.

Allowance transfer deadline means, for a control period in a given year, midnight of March 1 (if it is a business day), or midnight of the first business day thereafter (if March 1 is not a business day), immediately after such control period and is the deadline by which a CSAPR NO<sub>x</sub> Ozone Season Group 3 allowance transfer must be submitted for recordation in a CSAPR NO<sub>x</sub> Ozone Season Group 3 source's compliance account in order to be available for use in complying with the source's CSAPR NO<sub>x</sub> Ozone Season Group 3 emissions limitation for such control period in accordance with §§97.1006 and 97.1024.

**Compliance Demonstration**

The Permittee shall comply with the monitoring, record keeping, and reporting requirements found in §97.406, §97.430, §97.431, §97.432, and §97.433 for the CSAPR NO<sub>x</sub> Annual Trading Program; §97.1006, §97.1030, §97.1031, §97.1032, §97.1033 and §97.1034 for the CSAPR NO<sub>x</sub> Ozone Season Group 3 Trading Program; and §97.606, §97.630, §97.631, §97.632, and §97.633 and §97.634 for CSAPR SO<sub>2</sub> Group 1 Trading Program.

The Permittee operates continuous emission monitoring system (CEMS) pursuant to 40 CFR Part 75, Subpart B (for SO<sub>2</sub> monitoring) and 40 CFR Part 75, Subpart H (for NO<sub>x</sub> monitoring).

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**COMPLIANCE SCHEDULE**

Raven Power Fort Smallwood Complex is currently in compliance with all applicable air quality regulations.

**TITLE IV – ACID RAIN**

Raven Power Fort Smallwood Complex is subject to the Acid Rain Program requirements. The Phase II Acid Rain Permit renewal will be issued in conjunction with this Part 70 permit.

**TITLE VI – OZONE DEPLETING SUBSTANCES**

Raven Power Fort Smallwood Complex is subject to Title VI requirements.

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**SECTION 112(r) – ACCIDENTAL RELEASE**

Raven Power Fort Smallwood Complex is subject to the requirements of Section 112(r).

**PERMIT SHIELD**

Raven Power Fort Smallwood Complex facility requested that a permit shield be expressly included in the Permittee's Part 70 permit. Permit shields are granted on an emission unit by emission unit basis. If an emission unit is covered by a permit shield, a permit shield statement will follow the emission unit table in Section IV - Plant Specific Conditions of the permit. In this case, a permit shield was granted for each emission unit covered by the permit.

**INSIGNIFICANT ACTIVITIES**

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

- (1) No. 4 Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;

The *affected units* are subject to the following requirements:

- (A) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.
- (B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.
- (C) Exceptions:
  - (i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15

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consecutive minutes for the purpose of clearing the exhaust system.

- (ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
  - (a) Engines that are idled continuously when not in service: 30 minutes
  - (b) all other engines: 15 minutes.
- (iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

(2) ✓ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;

(3) No. 2 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The affected units are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

- (a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;
- (b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;
- (c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

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The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

- (a) Monthly records of the total VOC degreasing materials used; and
  - (b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.
- (4) Containers, reservoirs, or tanks used exclusively for:
- (a) No. 16 Storage of lubricating oils;
  - (b) No. 13 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
  - (c) No. 1 Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;
- (5)  Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;
- (6)  Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (7)  Laboratory fume hoods and vents;

*For the following, attach additional pages as necessary:*

- (8) any other emissions unit, not listed in this section, with a potential to emit less than the “de minimus” levels listed in COMAR 26.11.02.10X (list and describe units):

No. 2 Sandblasting booth \_\_\_\_\_

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**STATE ONLY ENFORCEABLE REQUIREMENTS**

This section of the permit contains state-only enforceable requirements. The requirements in this section will not be enforced by the U.S. Environmental Protection Agency. The requirements in this section are not subject to COMAR 26.11.03 10 - Public Petitions for Review to EPA Regarding Part 70 Permits.

Applicable Regulations:

**COMAR 26.11.06.08 – Nuisance.** “An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution.”

**COMAR 26.11.06.09 - Odors.** “A person may not cause or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.”

**Emissions Unit Number(s): FSC-BS-Unit1 and FSC-BS-Unit2**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the flyash separation equipment on site. The reburning of flyash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC).

Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**Applicable Standards/Limits:**

**PM CEMS Consent Agreement signed April 19, 2016.**

1. Raven Power shall maintain and operate a Particulate Matter Continuous Emissions Monitoring System (“PM CEMS”) downstream of all pollution control

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devices to record particulate emissions in the flue gas exiting the stacks of Brandon Shores Units 1 and 2 at all times when Units 1 or 2 are operating. Raven Power shall use all reasonable efforts to keep the PM CEMS continuously operating and producing data whenever the Unit served by the applicable PM CEMS is operating, such that the PM CEMS obtains valid hourly averages for a minimum of ninety five (95) percent of all Units operating hours in a calendar quarter. If in any calendar quarter the valid PM CEMS data is less than ninety five (95) percent, Raven Power shall submit a report to the Department within thirty (30) days of the end of the quarter which shall include:

- a. The reason for the monitoring downtime; and
- b. All corrective actions identified to improve valid PM CEMS data collection to at least ninety five (95) percent of all Unit operating hours. The report shall identify which corrective actions have been implemented, and shall include a completion schedule for any corrective actions which have not yet been implemented.

2. Notwithstanding any other provision of this Consent Agreement, up to a total of 24 operating hours of invalid data during any calendar quarter shall not be considered a failure to comply with this Consent Agreement unless Brandon Shores failed to use reasonable efforts to operate the PM CEMS on that Unit during the periods of downtime.

3. Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter concentration in grains per dry gas standard cubic feet on a 24-hour rolling average basis, unless State or federal law or regulations require a different averaging period or different procedures, in which case, Raven Power shall be subject to applicable state or federal requirements.

4. Raven Power shall calibrate and operate both PM CEMS in accordance with the Quality Assurance/Quality Control ("QA/QC") protocol previously submitted to and approved by the Department pursuant to the Consent Decree and developed in accordance with 40 CFR Part 60. The QA/QC protocol may be revised as agreed in writing by Raven Power and the Department.

5. PM CEMS data shall be used to demonstrate compliance with applicable particulate matter emissions limitations for Brandon Shores Units 1 and 2. Raven Power shall submit quarterly PM CEMS reports to the Department that comply with COMAR 26.11.01.11E. All data shall be reported in 24-hour rolling averages.

6. Raven Power shall maintain, in an electronic database, the average emission values recorded by each PM CEMS.

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7. Raven Power agrees not to contest the inclusion and incorporation of continuing obligations of this Consent Agreement into future Title V operating permits applicable to the Brandon Shores electric generating station.

**Emissions Unit Number(s): FSC-BS-Unit1 and FSC-BS-Unit2 & FSC-HAW-Unit3**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the flyash separation equipment on site. The reburning of flyash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC).

Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. **[MDE Reg. No. 3-0003]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**Applicable Standards/Limits:**

**COMAR 26.11.01.04 - Testing and Monitoring.**

**"A. Requirements for Testing.**

(1) The Department may require any person to conduct or have conducted testing to determine compliance with this subtitle. The Department, at its option, may witness or conduct these tests. This testing will be done at a reasonable time, and all information gathered during a testing operation will be provided to both parties."



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**Regional Haze Consent Order July 6, 2021**

**FSC-HAW-Unit1:** H.A. Wagner Unit 1 is a residual oil or natural gas fired unit [MDE Reg. No. 5-0469]

**FSC-HAW-Unit2:** H.A. Wagner Unit2 is a natural gas fired unit. [MDE Reg. No. 3-0017] (*modified in 2020-fuel switch from coal fired to natural gas fired*)

**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. [MDE Reg. No. 3-0003] (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**FSC-HAW-Unit4:** H.A. Wagner Unit 4 is a residual oil-fired unit with natural gas fired used for start-up. [MDE Reg. No. 4-0017]

**Applicable Standards/Limits:**

“By and through the Consent Order, Raven Power shall permanently cease the combustion of coal at the H.A. Wagner generating station by no later than January 1, 2026. This Paragraph is intended to neither prevent nor guarantee the netting/crediting of any emissions decreases associated with the permanent cessation of coal burning activities when determining the applicability of Prevention of Significant Deterioration or Nonattainment New Source Review permitting requirements, or other netting/crediting which may be permissible under Code of Maryland Regulations Title 20 or Title 26, in the event of the future addition of emissions units at the generating station, or any other potential modifications; and the enforceable obligations to permanently cease coal burning at the H. A. Wagner generating station established by this Paragraph shall be construed consistent with that intent.” [Reference: **Regional Haze Consent Order July 6, 2021**]

**Emissions Unit Number(s): FSC-BS-Unit1 and FSC-BS-Unit2 & FSC-HAW-Unit1, FSC-HAW-Unit3 and FSC-HAW-Unit4**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the flyash separation equipment on site. The reburning of flyash was

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approved in an August 2011 letter from the Maryland Public Service Commission (PSC).

Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**FSC-HAW-Unit1:** H.A. Wagner Unit 1 is a residual oil or natural gas fired unit **[MDE Reg. No. 5-0469]**

**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. **[MDE Reg. No. 3-0003]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**FSC-HAW-Unit4:** H.A. Wagner Unit 4 is a residual oil-fired unit with natural gas fired used for start-up. **[MDE Reg. No. 4-0017]**

**Applicable Standards/Limits:**

**For FSC-BS-Unit1 and FSC-BS-Unit2:**

**COMAR 26.11.09.05 – Visible Emissions**

“C. Fuel Burning Equipment Subject to Federal COM Requirements. Except for owners or operators of fuel burning equipment subject to any federal requirement that mandates operation of a COM and as provided in §D of this regulation, the owner or operator of fuel burning equipment required to install and operate a COM may discontinue the operation of the COM on fuel burning equipment that is served by a flue gas desulfurization device:

- (1) When emissions from the equipment do not bypass the flue gas desulfurization device serving the equipment;
- (2) When the flue gas desulfurization device serving the equipment is in operation;
- (3) If the owner or operator has demonstrated to the Department's satisfaction, in accordance with 40 CFR §75.14, as amended, and all other applicable State and federal requirements, that water vapor is present in the flue gas from the equipment and would impede the accuracy of opacity measurements; and
- (4) If the owner or operator has fully implemented an alternative plan, approved by the Department, for monitoring opacity levels and particulate matter emissions from the stack that includes:

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- (a) A schedule for monthly observations of visible emissions from the stack by a person trained to perform Method 9 observations; and
- (b) Installation and operation of a particulate matter CEM that complies with all applicable State and federal requirements for particulate matter CEMs.”

“D. If, for units equipped with a flue gas desulfurization device, emissions bypass the device and are discharged through a bypass stack, the bypass stack shall be equipped with a COM approved by the Department.”

**For FSC-HAW-Unit1, FSC-HAW-Unit3 and FSC-HAW-Unit4**

**COMAR 26.1.09.05A(4): Fuel Burning Equipment Required to Operate a COM.** The owner or operator of fuel burning equipment that is subject to the requirement to install and operate a COM shall demonstrate compliance with the applicable visible emissions limitation specified in §A(1) and (2) of this regulation as follows:

- (a) For units with a capacity factor greater than 25 percent, until December 31, 2009, compliance is achieved if visible emissions do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4 percent of the unit’s operating time in any calendar quarter, during which time visible emissions:
  - (i) Do not exceed 40.0 percent opacity, except for 5.0 hours or 0.5 percent of the unit’s operating time, whichever is greater;
  - (ii) Do not exceed 70.0 percent opacity for more than four (4) 6-minute periods, except that coal-fired units equipped with electrostatic precipitators may exceed 70.0 percent opacity for no more than 2.2 hours; and
  - (iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than 1.4 hours and do not exceed 70.0 percent opacity for more than two (2) six-minute periods;
- (b) For units with a capacity factor greater than 25 percent, beginning January 1, 2010, compliance is achieved if visible emissions do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 2 percent of the unit’s operating time in any calendar quarter, during which time visible emissions:
  - (i) Do not exceed 40.0 percent opacity, except for 5.0 hours or 0.5 percent of the unit’s operating time, whichever is greater;
  - (ii) Do not exceed 70.0 percent opacity for more than four (4) six-minute periods, except that coal-fired units equipped with electrostatic precipitators may exceed 70.0 percent opacity for no more than 2.2 hours; and
  - (iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than

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1.4 hours and do not exceed 70.0 percent opacity for more than two 6-minute periods;

(c) For units with a capacity factor equal to or less than 25 percent that operate more than 300 hours per quarter, beginning July 1, 2009, compliance with the applicable visible emissions limitation in §A(1) and (2) of this regulation is achieved if, during a calendar quarter, visible emissions do not exceed the applicable standard for more than 20.0 hours, during which time visible emissions:

(i) Do not exceed 40.0 percent opacity for more than 2.2 hours;

(ii) Do not exceed 70 percent for more than four 6-minute periods; and

(iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than 1.4 hours and do not exceed 70.0 percent opacity for more than two 6-minute periods; and

(d) For units with a capacity factor equal to or less than 25 percent that operate less than 300 hours per quarter, beginning July 1, 2009, compliance with the applicable visible emissions limitation in §A(1) and (2) of this regulation is achieved if, during a calendar quarter, visible emissions do not exceed the applicable standard for more than 12.0 hours, during which time visible emissions:

(i) Do not exceed 40.0 percent opacity for more than 2.2 hours;

(ii) Do not exceed 70.0 percent opacity for more than four 6-minute periods; and

(iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than 1.4 hours and do not exceed 70.0 percent opacity for more than two 6-minute periods.

**COMAR 26.11.09.05B. Determining Violations.**

(1) For each unit required to operate a COM pursuant to COMAR 26.11.01.10A(1)(a) and (b), each day during a calendar quarter when the opacity of emissions from that unit during the calendar quarter or calendar day, as applicable, exceeds the emission limitations in §A(4)(a), (b), (c) and (d) of this regulation shall constitute a separate day of violation.

(2) A violation of §A(4)(a)(i), (ii), or (iii), §A(4)(b)(i), (ii) or (iii), §A(4)(c)(i), (ii) or (iii), or §A(4)(d)(i), (ii) or (iii), of this regulation, as applicable, that occur on the same day shall constitute separate violations.

(3) A daily violation that occurs during the same calendar quarter as a quarterly violation is a separate violation.

**Operational Requirement For FSC-HAW-Unit1 and FSC-HAW-Unit4**

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Note: Requirement applies when burning used oil for energy recovery:

(1) The Permittee shall determine that used oil that is to be burned for energy recovery meets the fuel specifications of COMAR 26.11.09.10B. by performing analyses or obtaining copies of analyses or other information documenting that the used oil fuel meets the specifications.

(2) The Permittee shall keep copies of analyses of the used oil (or other information used to make the determination) for three years.

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**SO<sub>2</sub> Consent Agreement dated December 4, 2019**

**Emissions Unit Number(s): FSC-BS-Unit1 and FSC-BS-Unit2; FSC-HAW-Unit1, FSC-HAW-Unit2, FSC-HAW-Unit3 and FSC-HAW-Unit4**

**FSC-BS-Unit1 (BS1) and FSC-BS-Unit2 (BS2):** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the flyash separation equipment on site. The reburning of flyash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC).

Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**FSC-HAW-Unit1 (W1):** H.A. Wagner Unit 1 is a residual oil or natural gas fired unit **[MDE Reg. No. 5-0469]**

**FSC-HAW-Unit2 (W2):** H.A. Wagner Unit 2 is a natural gas fired unit. **[MDE Reg. No. 3-0017]** (*modified in 2020-fuel switch from coal fired to natural gas fired*)

**FSC-HAW-Unit3 (W3):** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. **[MDE Reg. No. 3-0003]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

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**FSC-HAW-Unit4 (W4):** H.A. Wagner Unit 4 is a residual oil-fired unit with natural gas fired used for start-up. [MDE Reg. No. 4-0017]

**Applicable Requirements**

1. Beginning January 1, 2021, at all times when Unit BS1 and/or BS2 at the Brandon Shores generating station (whether operating individually or in tandem) and Unit W3 at the H.A. Wagner generating station are simultaneously operating, the following SO<sub>2</sub> emissions limits shall apply:
  - a. Units BS1, BS2, and W3 shall not exceed a cumulative SO<sub>2</sub> emissions limit of 3,860 pounds per hour, as measured on a 30-day rolling average, including only those hours when the applicable units are operating; and
  - b. Units BS1 and BS2 (operating either individually or in tandem) shall not exceed a cumulative total of 435 hours per calendar year when the applicable units are operating at a combined SO<sub>2</sub> emissions rate greater than 2,851 pounds per hour.
2. Beginning January 1, 2021, at all times when operating, Unit BS1 and BS2 at the Brandon Shores generating station (whether operating individually or in tandem) shall not exceed a combined SO<sub>2</sub> emissions limit of 3,860 pounds per hour, as measured on a 30-day rolling average.
3. Beginning January 1, 2021, at all times when operating, Unit BS1 and BS2 at the Brandon Shores generating station (whether operating individually or in tandem) shall not exceed a combined SO<sub>2</sub> emissions limit of 9,980 pounds per hour, as measured on a rolling three-hour average.
4. Beginning January 1, 2021, at all times when Unit W3 at the H.A. Wagner generating station is not operating, Unit BS1 and BS2 at the Brandon Shores generating station (whether operating individually or in tandem) shall not exceed a combined SO<sub>2</sub> emissions limit of 5,150 pounds per hour, as measured on a 1-hour average, on more than three hours per calendar year.
5. Beginning January 1, 2021, at all times when operating, Unit W1 at the H.A. Wagner generating station shall not exceed an SO<sub>2</sub> emissions limit of 480 pounds per hour, as measured on a one-hour average.
6. Beginning January 1, 2021, at all times when operating, Unit W1 at the H.A. Wagner generating station shall not exceed 438 hours of operation per calendar year when burning fuel oil.
7. No later than July 1, 2020, Unit W2 at the H.A. Wagner generating station shall permanently cease burning coal and shall only burn natural gas.
8. Beginning January 1, 2021, at all times when operating, Unit W3 at the H.A. Wagner generating station shall not exceed an SO<sub>2</sub> emissions limit of 1,904 pounds per hour, as measured on a 30-day rolling average.
9. Beginning January 1, 2021, at all times when operating, Unit W3 at the H.A. Wagner generating station shall not exceed a maximum rate of 3,289 pounds SO<sub>2</sub> per hour, as measured on a one-hour average.

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10. Beginning January 1, 2021, at all times when operating, Unit W3 at the H.A. Wagner generating station shall not exceed a cumulative total of 336 hours per calendar year when the Unit's SO<sub>2</sub> emissions rate is greater than 2,299 pounds per hour, as measured on a one-hour average.

11. Beginning January 1, 2021, at all times when operating, Unit W4 at the H.A. Wagner generating station shall not exceed an SO<sub>2</sub> emissions limit of 1,350 pounds per hour, as measured on a one-hour average.

12. Beginning January 1, 2021, at all times when operating, Unit W4 at the H.A. Wagner generating station shall not exceed 438 hours of operation per calendar year when burning fuel oil.

**Testing Requirements:** See Monitoring Requirements

**Monitoring Requirements:**

14. For the purposes of Paragraphs 1-12, which require the calculation of emissions rates, an emissions rate shall be calculated as the sum of the SO<sub>2</sub> hourly emissions (lbs.) of all the applicable units during the applicable period, divided by the sum of the operating hours during the applicable period.

"Operating hour" is defined as any hour or portion of an hour that a unit combusts fossil fuel.

**Recording Requirements:** See Reporting Requirements

**Reporting Requirements.**

13. Raven Power will demonstrate compliance with the limitations of Paragraphs 1 through 12 through quarterly reports utilizing calculation methodologies, continuous emissions monitoring system (CEMS) availability requirements, and a report format approved by the Department. Raven Power shall submit the proposed methodologies, CEMS availability requirements, and report format within 6 months of the effective date of this consent order for approval by the Department. Raven Power shall submit each quarterly report within 30 days of the end of the applicable quarter.

15. Raven Power shall comply with the following contingency measures, which are a required component of the nonattainment SIP revision pursuant to Section 172(c)(9) of the Clean Air Act.

16. At any time that emissions from BS1, BS2, and/or W3 at the Fort Smallwood Complex exceed one or more of the SO<sub>2</sub> emissions limits or fuel oil operations limits identified in Paragraphs 1 through 12 of this Consent Order, Raven Power shall, with 48 hours of such exceedance, undertake a full-system audit of Units BS1, BS2, W1, W2, W3, and W4 (cumulatively) at the Fort Smallwood Complex and shall submit a telephone report on the next business day and a written report to the Department within 10 days of the exceedance.

At any time that emissions from Units W1, W2, and/or W4 at the Fort

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Smallwood Complex exceed one or more of the SO<sub>2</sub> emissions limits or fuel oil operations limits identified in Paragraphs 1 through 12 of this Consent Order, Raven Power shall, within 48 hours of knowledge of fuel test results, undertake a full-system audit of Units BS1, BS2, W1, W2, W3, and W4 (cumulatively) at the Fort Smallwood Complex and shall submit a telephone report on the next business day and a written report to the Department within 10 days of the exceedance. The telephone report shall be submitted pursuant to COMAR 26.11.01.07C. A written report to satisfy this requirement shall include both (1) the results of the full-system audit, and (2) a report of excess emissions prepared pursuant to COMAR 26.11.01.07D and Section 3.4 of the Operating Permit. The full-system audit shall consist of a review of the parameters routinely monitored by the continuous emissions monitoring systems and the digital data acquisition systems installed on the SO<sub>2</sub> generating units and their control devices and programs to determine whether or not the units and their controls were operating in accordance with good engineering practices.

a. If the units or their controls were not operating in accordance with good engineering practices, then Raven Power shall implement corrective actions to ensure that the limits of this Consent Order are not exceeded.

b. If the units and controls were operating in accordance with good engineering practice, then Raven Power shall inform the Department as to the reasons for their exceedance of one or more of their SO<sub>2</sub> emissions limits and implement corrective actions to ensure that the limits of this Consent Order are not exceeded.

c. In any case of an exceedance of an SO<sub>2</sub> emission limit or of a fuel oil operations limit, Raven Power shall document and notify the Department of the corrective actions that they have taken.

d. The audit, report of excess emissions, documentation of corrective actions taken, and associated records shall be maintained on site for five years.

17. If the Essex, Maryland monitor (AIRS ID 24-005-3001) or any other Department-approved air quality SO<sub>2</sub> monitor located within the SO<sub>2</sub> Nonattainment Area, measures a 1-hour SO<sub>2</sub> concentration exceeding 75 parts per billion (i.e., an exceedance of the 1-hour SO<sub>2</sub> NAAQS), then the Department will notify Raven Power within 5 business days both verbally and in writing. If, however, Raven Power first notifies the Department both verbally and in writing of the monitored exceedance, then the Department will not also notify Raven Power.

In either case, whether it is the Department or Raven Power who first notifies the other party of the monitor's exceedance of the 75 parts per billion SO<sub>2</sub> limit, within 2 business days of that first notification, Raven Power shall notify the Department whether Units BS1, BS2, W1, W2, W3, and W4 were running at the time of the exceedance or within 24 hours preceding the exceedance. If any of those Units were running during that timeframe, Raven Power shall analyze the meteorological data on the day the 1-hour exceedance occurred to



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determine the extent the Fort Smallwood SO<sub>2</sub> emissions contributed to the 1-hour exceedance. The meteorological data analysis shall include: (1) trajectories run at three different heights (one at stack height; and two more within the boundary layer) by the National Oceanic and Atmospheric Administration's Hysplit program or an equivalent program; and (2) an analysis of meteorological data including the Baltimore-Washington International Airport's meteorological data and modeled upper air data using the National Weather Service's Bufkit or an equivalent program. Raven Power shall submit its meteorological data analysis, and its findings there from, to the Department within 30 days of written notification of the exceedance of the 1-hour SO<sub>2</sub> NAAQS.

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### **Healthy Air Act Requirements**

These regulations became effective under an Emergency Action on January 18, 2007 and were adopted as permanent regulations on June 17, 2007. They implement the requirements of the Healthy Air Act (Ch. 23, Acts of 2006), which was signed into law on April 6, 2006 and which established emission limitations and related requirements for NO<sub>x</sub>, SO<sub>2</sub> and mercury. Regulations .1-.03, .03E, .05 and .06 related to the reductions of NO<sub>x</sub>, and SO<sub>2</sub> emissions were submitted to EPA as a revision to Maryland's State Implementation Plan (SIP) on June 12, 2007. The requirements for NO<sub>x</sub>, and SO<sub>2</sub> emissions, all except for one were approved by EPA, as a SIP revision on September 4, 2008 with an effective date of October 6, 2008. The requirements for mercury emissions are not part of the Maryland's SIP and are therefore, part of the State-Only Section.

### **Emissions Unit Number(s): FSC-BS-Unit1 and FSC-BS-Unit2; and FSC-HAW-Unit3**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the flyash separation equipment on site. The reburning of flyash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC).

Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid*

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*fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).*

**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. **[MDE Reg. No. 3-0003]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).*

**Applicable Regulations:**

**COMAR 26.11.27 - Emission Limitations for Power Plant**

**COMAR 26.11.27.03 – General Requirements**

A. An electric generating unit subject to this chapter shall comply with the emission limitations for NO<sub>x</sub>, SO<sub>2</sub>, and mercury as provided in this regulation.

B. NO<sub>x</sub> Emission Limitations.

Healthy Air Act State-Only enforceable NO<sub>x</sub> requirement

**COMAR 26.11.27.03B(7)(iii)** – “Not later than December 31 of the year in which the emission limitation is exceeded, the owner or operator of the affected generating unit or units transfers to the Maryland Environmental Surrender Account, ozone season NO<sub>x</sub> allowances equivalent in number to the tons of NO<sub>x</sub> emitted in excess of the emission limitation in §B(4) or (6), as applicable”.

**COMAR 26.11.27.03D. Mercury Emission Limitations.**

(1) For the 12 months beginning January 1, 2010 and ending with the 12 months beginning December 1, 2012 to December 1, 2013, each affected facility shall meet 12-month rolling average removal efficiency for mercury of at least 80 percent.

(2) For the 12 months beginning January 1, 2013 and thereafter, each affected facility shall meet 12-month rolling average removal efficiency for mercury of at least 90 percent.

(3) The mercury removal efficiency required in §D(1) and (2) of this regulation shall be determined in accordance with Regulation .04 of this chapter.

**COMAR 26.11.27.04 - Determining the Mercury Removal Efficiency for Affected Facilities.**

A. The procedures of §§B—F of this regulation shall be used to demonstrate compliance with the 12-month rolling average removal efficiency required for mercury by Regulation .03D of this chapter. The owner or operator of an affected facility shall notify the Department of the compliance demonstration method it has elected from §§D—F of this regulation on or before January 1, 2010, for the compliance period that commences on that date and on or before January 1, 2013, for the compliance period that commences on that date. The owner or operator of an electric generating unit that elects to demonstrate

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compliance with the required mercury removal efficiency by meeting the mass emissions limitation in §F of this regulation shall utilize that same method for all other electric generating units in the system. Once elected for each affected facility or system, as applicable, the option may not be changed during the designated compliance period but may be changed for the next compliance period.

**Note:** Fort Smallwood Complex selected demonstrating compliance by Meeting a Mercury Mass Emission Cap COMAR 26.11.27.04F(1) and (2) per letter signed by Edwin Much to Ralph Hall dated December 7,2009.

**F. Demonstrating Compliance by Meeting a Mercury Mass Emission Cap.**

(1) Compliance with the required mercury removal efficiency is demonstrated at an affected facility when the mass emissions from all affected facilities in a system, measured in pounds as a 12-month rolling average, do not exceed the applicable emission limits in §F(2) of this regulation.

(2) Mercury Emission Limits.

Affected Facility	Emission Limits Pounds per Year Beginning
	January 1, 2013
Brandon Shores	46
Wagner	33

(3) In the event that an electric generating unit at an affected facility subject to this chapter permanently ceases operation, the mass emission limitation in §F(2) of this regulation which is applicable to that affected facility shall be reduced proportionally based on the relative capacity, in megawatts, of all the electric generating units at the affected facility which are subject to this regulation.

(4) In the event that an entire affected facility within a system permanently ceases operation, the total mass emission limitation in §F(2) which is applicable to the system shall be reduced by the mass emission limitation applicable to the affected facility.

(5) Except during periods of startup, shutdown, malfunction or maintenance, the owner or operator of an electric generating unit shall ensure that mercury control measures are continuously employed on each unit and properly adjusted for optimal control taking into consideration the operating conditions.

**COMAR 26.11.27.05 - Monitoring and Reporting Requirements.**

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**A.** Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.

**COMAR 26.11.27.05 - Monitoring and Reporting Requirements.**

**B.** Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.

**C.** Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department.

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**Emissions Unit Number(s): FSC-BS-MH and FSC-HAW-MH**

**FSC-BS-MH**

The Brandon Shores material handling system consists of various equipment and processes to transport coal, fly ash, hydrated lime or equivalent, powdered activated carbon and other materials. There are facilities to mix coal with additives to reduce stack emissions. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment. **(MDE Reg. No. 6-1143)**

**FSC-HAW-MH**

The H.A. Wagner material handling system consists of various equipment and processes to transport coal, fly ash, hydrated lime or equivalent, powdered activated carbon and other materials. There are facilities to mix coal with additives to reduce stack emissions. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment. **(MDE Reg. No. 6-1144)**

**Applicable Regulations:**

**Management of Coal Combustion Byproducts (COMAR 26.04.10)**

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**COMAR 26.04.10.03 - General Restrictions and Specifically Prohibited Acts.**

**COMAR 26.04.10.03B(3) - Air Pollution**

“A person may not engage in the disposal, storage, transportation, processing, handling, or use of coal combustion byproducts without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, when appropriate as determined by the Department, those precautions described in COMAR 26.11.06.03C and D.”

**COMAR 26.04.10.03B(4) - Transportation**

“In addition to the requirements of §B(3) of this regulation, a person may not transport coal combustion byproducts without taking reasonable precautions to control fugitive air emissions relating to the transportation. These reasonable precautions shall include, at a minimum, the following:

(a) Vehicles transporting coal combustion byproducts shall be fully enclosed, or fully enclosed on all sides and covered with a firmly secured canvas or other covering, so as to prevent any coal combustion byproducts from blowing off, falling off, or spilling out of the vehicle, or the coal combustion byproducts shall be handled and transported in sealed containers designed for transportation of powdery solids;

(b) Before leaving a site where coal combustion byproducts are loaded or off-loaded, vehicles transporting coal combustion byproducts shall be rendered clean and free of excess material or debris that could blow off, fall off, or spill during transportation;

(c) Coal combustion byproducts being loaded into or off-loaded from a vehicle shall be sufficiently moistened or otherwise conditioned or contained to prevent particulate coal combustion byproducts from becoming airborne or causing fugitive air emissions;

(d) Following loading but prior to any transportation of coal combustion byproducts, the transporter shall inspect each vehicle that contains coal combustion byproducts to ensure that the requirements of §B(4) of this regulation are met;

(e) A transporter of coal combustion byproducts shall maintain an inspection log for each vehicle that shall be maintained in the vehicle at all times during transport of coal combustion byproducts, and for 30 days thereafter that shall certify compliance with the standards in §B(4) of this regulation; and

(f) An inspection log maintained by a transporter of coal combustion byproducts shall consist of an entry for each inspection of a vehicle that has been conducted by the transporter. An inspection entry shall consist of the following information:

(i) The date the inspection occurred;

(ii) The time of day the inspection occurred;

(iii) The name of the person conducting the inspection;

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- (iv) The condition of the vehicle and any corrective action required to ensure compliance with this subsection, for example, "truck cleaned and covered" for a vehicle that meets the requirements, or "cover OK, right side wheels hosed off again" for a vehicle that was properly covered but which required re-cleaning of wheels on the right side; and
- (v) The signature of the individual certifying compliance with §B(4) of this regulation."

**COMAR 26.04.10.05 - Storage.**

"A. A person may not store coal combustion byproducts except in accordance with the provisions of this regulation.

B. A person may not store coal combustion byproducts directly on the surface of the ground or in an unlined surface impoundment, pit, pond, or lagoon without the authorization of the Department.

C. A person shall store coal combustion byproducts in a manner that prevents contact with waters of this State and that is designed either to minimize contact with precipitation or to collect leachate that may result from contact with precipitation.

D. A person may not use a storage system for coal combustion byproducts unless the storage system is:

(1) Designed, constructed, and installed to contain coal combustion byproducts and contaminants in the coal combustion byproducts and prevent them from being released to the environment; and

(2) Provided with a roof or other protections to prevent nuisance, air pollution, and unlawful discharges of contaminated stormwater or leachate to the waters of this State.

E. A person may not store coal combustion byproducts in an area likely to pollute the waters of this State.

F. Responsibility for the prompt control, containment, and removal of any released coal combustion byproducts or for placing coal combustion byproducts in a position likely to pollute the waters of this State shall be with the person responsible for the release, and with the owner and operator of the facility, site, or storage system where the release occurred. This responsibility shall continue until removal or clean-up of any contamination or pollution from the release has been accomplished to the satisfaction of the Department.

G. The Department may impose specific requirements for the storage of coal combustion byproducts upon a determination that storage of coal combustion byproducts has caused or is likely to cause a discharge to the waters of the State, is a nuisance, or otherwise poses a threat to public health or the environment.

H. The owner and operator of a facility, site, or storage system shall ensure that:

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- (1) A release of coal combustion byproducts during storage operations due to spilling or overflowing does not occur;
- (2) Adequate storage space is available to handle the volume of coal combustion byproducts generated and to be stored; and
- (3) Transfer, handling, and storage operations are performed in a manner that shall prevent, contain, and clean up spills of coal combustion byproducts.”

**COMAR 26.11.15.05**, which requires that the Permittee implement “Best Available Control Technology for Toxics”

**COMAR 26.11.15.06**, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health

**Emissions Unit Number(s): FSC-BS-Unit1 and FSC-BS-Unit2 & FSC-HAW-Unit3**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the flyash separation equipment on site. The reburning of flyash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC).

Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. **[MDE Reg. No. 3-0003]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**COMAR 26.11.38 – Control of NO<sub>x</sub> Emissions from Coal-Fired Electric Generating Units.**

**Applicable Regulations:**

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**COMAR 26.11.38.02 – Applicability**

“The provisions of this chapter apply to an affected electric generating unit as that term is defined in §.01B of this chapter.”

**COMAR 26.11.38.03 – NO<sub>x</sub> Emission Control Requirements**

**A. Daily NO<sub>x</sub> Reduction Requirements During the Ozone Season**

- (1) Not later than 45 days after the effective date of this regulation, the owner or operator of an affected electric generating unit shall submit a plan to the Department and EPA for approval that demonstrated how each affected electric generating unit (“the unit”) will operate installed pollution control technology and combustion controls to meet the requirements of §A(2) of this regulation. The plan shall cover all modes of operation, including but not limited to normal operations, start-up, shut-down and low load operations.
- (2) Beginning on May 1, 2015, for each operating day during the ozone season, the owner or operator of an affected electric generating unit shall minimize NO<sub>x</sub> emissions by operating and optimizing the use of all installed pollution control technology and combustion controls consistent with the technological limitations, manufacturers’ specification, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions (as defined in 40 CFR §60.11(d)) for such equipment and the unit at all times the unit is in operation while burning any coal.

**B. Ozone Season NO<sub>x</sub> Reduction Requirements.**

- (1) Except as provided in §B(3) of this regulation, the owner or operator of an affected electric generating unit shall not exceed a NO<sub>x</sub> 30-day system-wide rolling average emission rate of 0.15 lbs./MMBtu during the ozone season.
- (2) The owner or operator of an affected electric generating unit subject to the provisions of this regulation shall continue to meet ozone season NO<sub>x</sub> reduction requirements in COMAR 26.11.27.

**C. Annual NO<sub>x</sub> Reduction Requirements.**

The owner or operator of an affected electric generating unit subject to the provisions of this regulation shall continue to meet the annual NO<sub>x</sub> reduction requirements in COMAR 26.11.27.

**COMAR 26.11.38.05 – Compliance Demonstration Requirements**

**A. Procedures for Demonstrating Compliance with Regulation .03A of this Chapter.**

- (1) An affected electric generating unit shall demonstrate, to the Department’s satisfaction, compliance with Regulation .03A(2) of this chapter, using the information collected and maintained in accordance with Regulation .03A(1) of



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this chapter and any additional documentation available to and maintained by the affected electric generating unit.

(2) An affected electric generating unit shall not be required to submit a unit-specific report consistent with §A(3) of this regulation when the unit emits at levels that are at or below the following rates:

Affected Unit	24-Hour Block Average NO <sub>x</sub> Emissions in lbs./MMBtu
Brandon Shores	
Unit 1	0.08
Unit 2	
<650 MWg	0.07
≥650 MWg	0.15
H.A. Wagner	
Unit 3	0.07

(3) The owner or operator of an affected electric generating unit subject to Regulation .03A(2) of this chapter shall submit a unit-specific report for each day the unit exceeds its NO<sub>x</sub> emission rate under §A(2) of this regulation, which shall include the following information for the entire operating day:

- (a) Hours of operation for the unit;
- (b) Hourly averages of operating temperature of installed pollution control technology;
- (c) Hourly averages of heat input (MMBtu/hr.);
- (d) Hourly averages of output (MWh);
- (e) Hourly averages of ammonia or urea flow rates;
- (f) Hourly averages of NO<sub>x</sub> emissions data (lbs./MMBtu and tons);
- (g) Malfunction data;
- (h) The technical and operational reason the rate was exceeded, such as:
  - (i) Operator error;
  - (ii) Technical events beyond the control of the owner or operator (e.g., acts of God, malfunctions); or
  - (iii) Dispatch requirements that mandate unplanned operation (e.g., start-ups and shut-downs, idling, and operation at low voltage or low load);
- (i) A written narrative describing any actions taken to reduce emission rates; and
- (j) Other information that the Department determines is necessary to evaluate the data or to ensure that compliance is achieved.

(4) An exceedance of the emissions rate under §A(2) of this regulation as a result of factors including but not limited to start-up, shut-down, days when the unit was directed by the electric grid operator to operate at low load or to operate pursuant to any emergency generation operations required by the electric grid operator, including necessary testing for such emergency

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operations, or which otherwise occurred during operations which are deemed consistent with the unit's technological limitations, manufacturers' specifications, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions, shall not be considered a violation of Regulation .03A(2) of this chapter provided that the provisions of the approved plan as required in Regulation .03A(1) of this chapter are met.

B. Procedures for Demonstrating Compliance with NO<sub>x</sub> Emission Rates under this Chapter.

(1) Compliance with the NO<sub>x</sub> emission rate limitations in Regulations .03B(1) and D(2), .04B(1)(b), B(4), C(1), C(2), C(3), and E(1)(b), and .05A(2) of this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.

(2) For Regulation .03B(1), .04C(1), C(2), and C(3) of this chapter, in order to calculate the 30-day systemwide rolling average emission rates, if 29 system operating days are not available from the current ozone season, system operating days from the previous ozone season shall be used.

(3) For Regulation .04B(1)(b) of this chapter, in order to calculate the 30-day rolling average emission rates, if 29 operating days are not available from the current ozone season, operating days from the previous ozone season shall be used.

**COMAR 26.11.38.06 – Reporting Requirements**

A. Reporting Schedule

(1) Beginning 30 days after the first month of the ozone season following the effective date of this chapter, each affected electric generating unit subject to the requirements of this chapter shall submit a monthly report to the Department detailing the status of compliance with this chapter during the ozone season.

(2) Each subsequent monthly report shall be submitted to the Department not later than 30 days following the end of the calendar month during the ozone season.

B. Monthly Reports During Ozone Season. Monthly reports during the ozone season shall include:

(1) Daily pass or fail of the NO<sub>x</sub> emission rates of .05A(2) of this chapter;  
(2) The reporting information as required under .05A(3) of this chapter;  
and

(3) The 30-day system-wide rolling average emissions rate for each affected electric generating unit to demonstrate compliance with .03B(1), .04C(1), C(2) and C(3) of this chapter, as applicable;

(4) For an affected electric generating unit which has selected the compliance option of Regulation .04B(1) of this chapter, beginning June 1, 2020, the 30-day rolling average emission rate calculated in lbs./MMBtu;

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- (5) For an affected electric generating unit which has selected the compliance option of Regulation .04B(4) of this chapter, beginning June 1, 2016, the 30-day rolling average emission rate and 30-day systemwide rolling average emission rate calculated in lbs./MMBtu;
- (6) For an affected electric generating unit which has selected the compliance option of Regulation .04B(4) of this chapter, beginning June 1, 2020, data, information and calculation which demonstrate the systemwide NO<sub>x</sub> emission rate as determined on a 24-hr block or the actual systemwide daily NO<sub>x</sub> emissions in tons for each day during the month; and
- (7) For an affected electric generating unit which has selected the compliance option of Regulation .04E(1)(b) of this chapter, beginning June 1, 2020, data, information, and calculations which demonstrate the systemwide NO<sub>x</sub> emission rate as determined on a 24-hour block average for each day during the month.

**COMAR 26.11.38.06 – Electric System Reliability During Ozone Season**

- A. In the event of emergency operations, a maximum of 12 hours of operations per system per ozone season may be removed from the calculation of the NO<sub>x</sub> limitations in Regulation .04(B)(4) of this chapter from the unit or units responding to the emergency operations provided that:
  - (1) Within one business day following the emergency operation, the owner or operator of the affected electric generating unit or units notifies the Manager of the Air Quality Compliance program of the emergency operations taken by the PJM Interconnection; and
  - (2) Within five business days following the emergency operation, the owner or operator of the affected electric generating unit or units provides the Department with the following information:
    - (a) PJM documentation of the emergency event called, and the unit or units requested to operate;
    - (b) Unit or units dispatched for the emergency operation;
    - (c) Number of hours that the unit or units responded to the emergency operation and the consecutive hours that will be used towards the calculation of the NO<sub>x</sub> limitations in §.04B(4) of this chapter; and
    - (d) Other information regarding efforts the owner or operator took to minimize NO<sub>x</sub> emissions in accordance with Regulation .03A(1) of this chapter on the day that the emergency operation was called.
- B. Any partial hour in which a unit operated in response to emergency operation under §A of this regulation shall constitute a full hour of operations. “

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Record Keeping and Reporting:

The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:

- (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
- (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

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**SECTION I SOURCE IDENTIFICATION**

**1. DESCRIPTION OF FACILITY**

Raven Power (Raven) operates Brandon Shores and H.A. Wagner (Wagner) generating stations at a complex located at 1005 Brandon Shores Drive, Baltimore Maryland (Fort Smallwood Complex). The two (2) generating stations are co-located on a 456-acre site. Emissions from both generating stations are aggregated for permitting purposes and thus the entire complex operates under one Title V permit. The SIC code of Fort Smallwood is 4911.

The Fort Smallwood Complex is located in northern Anne Arundel County, on the Patapsco River, of Fort Smallwood Road. The Complex is comprised of two generating stations and a warehouse.

The primary emission units at **Brandon Shores** are two (2) coal-fired generating units with a combined nominal generating capacity of approximately 1,370 megawatts (MW). Each unit has a rated capacity of 7,128 million British thermal units per hour (MMBtu/hr.). Unit #1 (MDE Registration #3-0015) was placed in commercial service in 1984, and Unit #2 (MDE Registration #3-0016) was placed in commercial service in 1991. Both units are Babcock and Wilcox (B&W) solid fossil fuel-fired (coal), dry bottom boilers with circular wall burners. No. 2 fuel oil is used for start-up and main burner ignition. Coal is transferred to the plant storage bunker via conveyor belts, after which the coal is pulverized and blown into the furnace. Unit #1 is equipped with overfire air and low nitrogen oxide (NO<sub>x</sub>) burners. Unit #2 is equipped with low NO<sub>x</sub> burners and BOOS (burners out of service). Currently for each unit, the flue gas is passed through hot-side electrostatic precipitators (ESPs) and selective catalytic reduction (SCR) to reduce NO<sub>x</sub> emissions. The gas is then treated with a dry sorbent injection system for the control of sulfuric acid mist and powdered activated carbon (PAC) injection system for the control of mercury (Hg) and passed through fabric filter baghouses to collect the particulate matter (PM) emissions, followed by a flue gas desulfurization (FGD) system for the removal of sulfur dioxide (SO<sub>2</sub>). Ash is collected from the ESP hoppers and conveyed pneumatically to storage silos from where it is loaded into trucks for final disposition. Both units are equipped with continuous emissions monitoring systems (CEMS) for NO<sub>x</sub>, SO<sub>2</sub>, carbon dioxide (CO<sub>2</sub>), Hg and PM.

*(Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).*

Brandon also has two (2) No. 2 fuel oil-fired auxiliary boilers (MDE Registrations #4-0507 and #4-0508) each rated at 145 MMBtu/hr. used for supplying steam to Brandon Shores. *(Aux boiler 1 received permit to construct in 2022 to add*

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*natural gas firing capability; modification expected to be completed by Dec 31, 2025).*

Brandon Shores has two (2) 500 horsepower (hp) emergency diesel fired internal combustion quench pumps (MDE Registration #9-0988) used to provide water to the FGD equipment in the case of emergencies. Brandon Shores also has material handling operations for coal and fly ash (MDE Registration #6-1143), as well as for limestone and gypsum (MDE Registrations #6-1149 and #6-1150) that includes the transfer of material using conveyors and storage in large outdoor piles. Fugitive emissions of PM from these operations are controlled through the use of enclosures, and/or wet suppression. Raven also operates a 670 HP emergency generator at Brandon Shores, which was installed in 1979, that is used to supply electricity during emergency situations.

The primary emission units at **Wagner** are three (3) steam-electric generating units with a combined nominal rating of approximately 905 MW and one (1) natural gas fired boiler. Unit #1 (MDE Registration #5-0489) is a natural gas and residual oil-fired B&W dry bottom wall-fired boiler, which began operation in 1956. Unit #1 is rated at 1,337 MMBtu/hr. and is controlled by a cold side ESP. Unit #1 is equipped with a CEMS for NO<sub>x</sub> and CO<sub>2</sub> and COMS for opacity. Unit #2 (MDE Registration #3-0017) is a natural gas fired B&W dry bottom wall-fired boiler equipped with low NO<sub>x</sub> burners, which began operation in 1959 (*modified in 2020-fuel switch from coal fired to natural gas fired*) and rated at 250 MMBtu/hr. Unit #3 (MDE Registration #3-0003) is a B&W coal-fired, once-through supercritical steam boiler, which began operation in 1966. Unit #3 is rated at 2,740 MMBtu/hr. and is controlled by an SCR for NO<sub>x</sub> control, PAC injection for Hg control, and a cold-side ESP for PM control. Unit #3 is equipped with CEMS for NO<sub>x</sub>, CO<sub>2</sub>, SO<sub>2</sub> and Hg and COMS for opacity. (*Permit to construct issued in 2022 for fuel switch from coal fired to blend of residual oil and distillate oils; Modification expected to be completed by Dec 31, 2025*). Unit #4 (MDE Registration #4-0017) is a B&W dry bottom wall-fired residual fuel oil-fired steam boiler, which began operation in 1972. Unit #4 is rated at 4,200 MMBtu/hr. and is controlled by a multiple cyclone for the control of PM. Unit #4 is equipped with CEMS for NO<sub>x</sub>, and CO<sub>2</sub> and COMS for opacity. All four units use natural gas for startup and main burner ignition. Ash from the coal boilers is collected from the ESP hoppers and conveyed pneumatically to storage silos from where it is loaded into trucks for final disposition. Wagner also has a No. 2 oil-fired combustion turbine (MDE Registration #4-0007) used to supply "black-start" capability and for peaking operation. In addition, material handling operations of coal and ash (MDE Registration #6-1144) are performed at Wagner, which generate fugitive emissions of PM. These handling operations include the transfer of material using conveyors, the crushing of coal, and storage in large outdoor piles. Fugitive emissions of PM from these operations are controlled through the use of enclosures and/or wet suppression. A CPCN (Case #9338)



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was also issued on July 30, 2014, that permits the construction of hydrated lime handling facilities at Wagner, related to the addition of a dry sorbent (hydrate lime and/or Trona) injection system on Wagner Unit 3. These facilities which will consist of processes for the receiving and handling of sorbent, and the storage of sorbent in up to four (4) silos. In addition, the CPCN issued on July 30, 2014, authorized the combustion of bituminous coal, sub-bituminous coal, or any blend of bituminous and sub-bituminous coal at Wagner Unit #3.

**2. FACILITY INVENTORY LIST**

<b>Emissions Unit Number</b>	<b>MDE – ARA Registration Number</b>	<b>Emissions Unit Name and Description</b>	<b>Date of Installation</b>
FSC-BS-Unit1	3-0015	Brandon Shores Unit 1 is a solid fossil fuel fired generating unit with No.2 oil used for start-up purposes. The Unit is also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site. The reburning of fly ash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC). The emissions from Brandon Shores Unit 1 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse, and a flue gas desulfurization (FGD) system prior to being discharged through a single stack. (Emission Point: FSC-BS-Unit1-EP1) <b><i>PTC issued in 2022 for fuel switch primary fuel to No. 2 fuel oil. The existing ESP and SCR system (year-round as needed) will continue to be used and emissions directed to the original taller stack.</i></b>	05/1984; Modification expected to be completed by Dec 31, 2025
FSC-BS-Unit2	3-0016	Brandon Shores Unit 2 is a solid fossil fuel fired generating unit with No.2 oil used for start-up purposes. The Unit is also capable of re-burning high carbon fly ash with the solid fuel/coal that has been	05/1991; Modification expected to be completed

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<b>Emissions Unit Number</b>	<b>MDE – ARA Registration Number</b>	<b>Emissions Unit Name and Description</b>	<b>Date of Installation</b>
		<p>recovered from the fly ash separation equipment on site. The reburning of fly ash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC). The emissions from Brandon Shores Unit 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse, and a flue gas desulfurization (FGD) system prior to being discharged through a single stack. (Emission Point: FSC-BS-Unit2-EP1)</p> <p><b><i>PTC issued in 2022 for fuel switch primary fuel to No. 2 fuel oil. The existing ESP and SCR system (year-round as needed) will continue to be used and emissions directed to the original taller stack</i></b></p>	by Dec 31, 2025.
FSC-BS-AuxBlr1	4-0507	<p>#1 Auxiliary Boiler: Zurn (Model 18M Keystone) is a No. 2 oil fired boiler used for supplying steam to Brandon Shores Station. The emissions from #1 Auxiliary Boiler are discharged through a single stack. (Emission Point: FSC-BS-AuxBlr1-EP1). <b><i>PTC issued in 2022 for addition of natural gas firing capability.</i></b></p>	05/1973; Modification expected to be completed by Dec 31, 2025.
FSC-BS-AuxBlr2	4-0508	<p>#2 Auxiliary Boiler: Zurn (Model 18M Keystone) is a No. 2 oil fired boiler used for supplying steam to Brandon Shores Station. The emissions from #2 Auxiliary Boiler are discharged through a single stack (Emission Point: FSC-BS-AuxBlr2-EP1).</p>	05/1973
FSC-BS-MH	6-1143	<p>The Brandon Shores material handling system consists of various equipment and processes to transport coal, fly ash, hydrated lime or equivalent, powdered activated carbon and other materials. There are facilities to mix coal with additives to reduce stack emissions. Equipment and processes may include</p>	05/1973

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<b>Emissions Unit Number</b>	<b>MDE – ARA Registration Number</b>	<b>Emissions Unit Name and Description</b>	<b>Date of Installation</b>
		unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment.	
FSC-BS-LSH	6-1149	The Brandon Shores limestone handling system consists of various equipment and processes to handle limestone. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment.	12/2009
FSC-BS-GH	6-1150	The Brandon Shores gypsum handling system consists of various equipment and processes to handle gypsum. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment.	12/2009
FSC-BS-QP	9-0988	The Quench Pumps are two (2) 500 HP diesel-fired internal combustion engines that are used to supply water to the flue gas desulfurization (FGD) system in case of emergencies.	12/2009
FSC-BS-EG	N/A	The emergency generator is a 670 HP diesel-fired internal combustion engine installed at the facility to provide back-up power.	1979
FSC-HAW-Unit1	5-0489	H.A. Wagner Unit 1 is a residual oil or natural gas fired unit (nominally rated at 133 MW). The emissions from H.A. Wagner Unit 1 are passed through an electrostatic precipitator prior to being discharged through a single stack (Emission Point: FSC-HAW-Unit1-EP1).	02/1956
FSC-HAW-Unit2	3-0017	H.A. Wagner Unit 2 is a natural gas unit that no longer generates electricity and is used as an industrial boiler rated at 250-MMBtu/hr. The emissions from H.A. Wagner Unit 2 are discharged through a single stack (Emission Point: FSC-HAW-Unit2-EP1).	01/1959. Modified 2020

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Emissions Unit Number	MDE – ARA Registration Number	Emissions Unit Name and Description	Date of Installation
		<b><i>PTC issued in 2020 for fuel switch from coal fired to natural gas fired.</i></b>	
FSC-HAW-Unit3	3-0003	H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up (nominally rated at 359 MW). The emissions from H.A. Wagner Unit 3 pass through an SCR, a dry sorbent injection (hydrated lime or equivalent), a powdered activated carbon (PAC) injection system, and an electrostatic precipitator prior to being discharged through a single stack. (Emission Point: FSC-HAWUnit3-EP1) <b><i>PTC issued in 2022 for fuel switch primary fuel to a blend of residual oil and distillate oils.</i></b>	08/1966; Modification expected to be completed by Dec 31, 2025
FSC-HAW-Unit4	4-0017	H.A. Wagner Unit 4 is a residual oil-fired unit with natural gas fired used for start-up (nominally rated at 415 MW). The emissions from H.A. Wagner 4 are passed through mechanical collectors prior to being discharged through a single stack (Emission Point: FSC-HAW-Unit4-EP1).	08/1972
FSC-HAW-CT	4-0007	H.A. Wagner combustion turbine is a No. 2 oil fired combustion turbine used to supply “black start” capability to H.A. Wagner and for peaking operation. The emissions from the combustion turbine are passed through a single stack (Emission Point: FSC-HAW-CT-EP1)	08/1967
FSC-HAW-MH	6-1144	The H.A. Wagner material handling system consists of various equipment and processes to transport coal, fly ash, hydrated lime or equivalent, powdered activated carbon and other materials. There are facilities to mix coal with additives to reduce stack emissions. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment.	05/1956

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**SECTION II GENERAL CONDITIONS**

**1. DEFINITIONS**

**[COMAR 26.11.01.01] and [COMAR 26.11.02.01]**

The words or terms in this Part 70 permit shall have the meanings established under COMAR 26.11.01 and .02 unless otherwise stated in this permit.

**2. ACRONYMS**

ARA	Air and Radiation Administration
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
gr	grains
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
MDE	Maryland Department of the Environment
MVAC	Motor Vehicle Air Conditioner
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO <sub>x</sub>	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
OTR	Ozone Transport Region
PM	Particulate Matter
PM10	Particulate Matter with Nominal Aerodynamic Diameter of 10 micrometers or less
ppm	parts per million
ppb	parts per billion
PSD	Prevention of Significant Deterioration
PTC	Permit to construct
PTO	Permit to operate (State)
SIC	Standard Industrial Classification

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SO <sub>2</sub>	Sulfur Dioxide
TAP	Toxic Air Pollutant
tpy	tons per year
VE	Visible Emissions
VOC	Volatile Organic Compounds

**3. EFFECTIVE DATE**

The effective date of the conditions in this Part 70 permit is the date of permit issuance, unless otherwise stated in the permit.

**4. PERMIT EXPIRATION**

**[COMAR 26.11.03.13B(2)]**

Upon expiration of this permit, the terms of the permit will automatically continue to remain in effect until a new Part 70 permit is issued for this facility provided that the Permittee has submitted a timely and complete application and has paid applicable fees under COMAR 26.11.02.16.

Otherwise, upon expiration of this permit the right of the Permittee to operate this facility is terminated.

**5. PERMIT RENEWAL**

**[COMAR 26.11.03.02B(3)] and [COMAR 26.11.03.02E]**

The Permittee shall submit to the Department a completed application for renewal of this Part 70 permit at least 12 months before the expiration of the permit. Upon submitting a completed application, the Permittee may continue to operate this facility pending final action by the Department on the renewal.

The Permittee, upon becoming aware that any relevant facts were omitted, or incorrect information was submitted in the permit application, shall submit such supplementary facts or corrected information no later than 10 days after becoming aware that this occurred. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a completed application was submitted, but prior to the release of a draft

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permit. This information shall be submitted to the Department no later than 20 days after a new requirement has been adopted.

**6. CONFIDENTIAL INFORMATION**

**[COMAR 26.11.02.02G]**

In accordance with the provisions of the State Government Article, Sec. 10-611 et seq., Annotated Code of Maryland, all information submitted in an application shall be considered part of the public record and available for inspection and copying, unless the Permittee claims that the information is confidential when it is submitted to the Department. At the time of the request for inspection or copying, the Department will make a determination with regard to the confidentiality of the information. The Permittee, when requesting confidentiality, shall identify the information in a manner specified by the Department and, when requested by the Department, promptly provide specific reasons supporting the claim of confidentiality. Information submitted to the Department without a request that the information be deemed confidential may be made available to the public. Subject to approval of the Department, the Permittee may provide a summary of confidential information that is suitable for public review. The content of this Part 70 permit is not subject to confidential treatment.

**7. PERMIT ACTIONS**

**[COMAR 26.11.03.06E(3)] and [COMAR 26.11.03.20(A)]**

This Part 70 permit may be revoked or reopened and revised for cause. The filing of an application by the Permittee for a permit revision or renewal; or a notification of termination, planned changes or anticipated noncompliance by the facility, does not stay a term or condition of this permit.

The Department shall reopen and revise, or revoke the Permittee's Part 70 permit under the following circumstances:

- a. Additional requirements of the Clean Air Act become applicable to this facility and the remaining permit term is 3 years or more;

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- b. The Department or the EPA determines that this Part 70 permit contains a material mistake, or is based on false or inaccurate information supplied by or on behalf of the Permittee;
- c. The Department or the EPA determines that this Part 70 permit must be revised or revoked to assure compliance with applicable requirements of the Clean Air Act; or
- d. Additional requirements become applicable to an affected source under the Federal Acid Rain Program.

**8. PERMIT AVAILABILITY**

**[COMAR 26.11.02.13G]**

The Permittee shall maintain this Part 70 permit in the vicinity of the facility for which it was issued, unless it is not practical to do so, and make this permit immediately available to officials of the Department upon request.

**9. REOPENING THE PART 70 PERMIT FOR CAUSE BY THE EPA**

**[COMAR 26.11.03.20B]**

The EPA may terminate, modify, or revoke and reissue a permit for cause as prescribed in 40 CFR §70.7(g)

**10. TRANSFER OF PERMIT**

**[COMAR 26.11.02.02E]**

The Permittee shall not transfer this Part 70 permit except as provided in COMAR 26.11.03.15.

**11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS**

**[COMAR 26.11.03.14] and [COMAR 26.11.03.06A(8)]**

- a. The Permittee shall submit an application to the Department to revise this Part 70 permit when required under COMAR 26.11.03.15 -.17.



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- b. When applying for a revision to a Part 70 permit, the Permittee shall comply with the requirements of COMAR 26.11.03.02 and .03 except that the application for a revision need include only information listed that is related to the proposed change to the source and revision to the permit. This information shall be sufficient to evaluate the proposed change and to determine whether it will comply with all applicable requirements of the Clean Air Act.
- c. The Permittee may not change any provision of a compliance plan or schedule in a Part 70 permit as an administrative permit amendment or as a minor permit modification unless the change has been approved by the Department in writing.
- d. A permit revision is not required for a change that is provided for in this permit relating to approved economic incentives, marketable permits, emissions trading, and other similar programs.

**12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS**

**[COMAR 26.11.03.17]**

The Permittee may apply to the Department to make a significant modification to its Part 70 Permit as provided in COMAR 26.11.03.17 and in accordance with the following conditions:

- a. A significant modification is a revision to the federally enforceable provisions in the permit that does not qualify as an administrative permit amendment under COMAR 26.11.03.15 or a minor permit modification as defined under COMAR 26.11.03.16.
- b. This permit does not preclude the Permittee from making changes, consistent with the provisions of COMAR 26.11.03, that would make the permit or particular terms and conditions of the permit irrelevant, such as by shutting down or reducing the level of operation of a source or of an emissions unit within the source. Air pollution control equipment shall not be shut down or its level of operation reduced if doing so would violate any term of this permit.
- c. Significant permit modifications are subject to all requirements of COMAR 26.11.03 as they apply to permit issuance and renewal,

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including the requirements for applications, public participation, and review by affected states and EPA, except:

- (1) An application need include only information pertaining to the proposed change to the source and modification of this permit, including a description of the change and modification, and any new applicable requirements of the Clean Air Act that will apply if the change occurs;
  - (2) Public participation, and review by affected states and EPA, is limited to only the application and those federally enforceable terms and conditions of the Part 70 permit that are affected by the significant permit modification.
- d. As provided in COMAR 26.11.03.15B(5), an administrative permit amendment may be used to make a change that would otherwise require a significant permit modification if procedures for enhanced preconstruction review of the change are followed that satisfy the requirements of 40 CFR 70.7(d)(1)(v).
  - e. Before making a change that qualifies as a significant permit modification, the Permittee shall obtain all permits-to-construct and approvals required by COMAR 26.11.02.
  - f. The Permittee shall not make a significant permit modification that results in a violation of any applicable requirement of the Clean Air Act.
  - g. The permit shield in COMAR 26.11.03.23 applies to a final significant permit modification that has been issued by the Department, to the extent applicable under COMAR 26.11.03.23.

**13. MINOR PERMIT MODIFICATIONS**

**[COMAR 26.11.03.16]**

The Permittee may apply to the Department to make a minor modification to the federally enforceable provisions of this Part 70 permit as provided in COMAR 26.11.03.16 and in accordance with the following conditions:

- a. A minor permit modification is a Part 70 permit revision that:

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- (1) Does not result in a violation of any applicable requirement of the Clean Air Act;
- (2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:
  - (a) Adding new requirements,
  - (b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or
  - (c) Changing from one approved test method for a pollutant and source category to another;
- (3) Does not require or modify a:
  - (a) Case-by-case determination of a federally enforceable emissions standard,
  - (b) Source specific determination for temporary sources of ambient impacts, or
  - (c) Visibility or increment analysis;
- (4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has assumed to avoid an applicable requirement to which the source would otherwise be subject, including:
  - (a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification; and
  - (b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act
- (5) Is not a Title I modification; and

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- (6) Is not required under COMAR 26.11.03.17 to be processed as a significant modification to this Part 70 permit.

b. Application for a Minor Permit Modification

The Permittee shall submit to the Department an application for a minor permit modification that satisfies the requirements of COMAR 26.11.03.03 which includes the following:

- (1) A description of the proposed change, the emissions resulting from the change, and any new applicable requirements that will apply if the change is made;
- (2) The proposed minor permit modification;
- (3) Certification by a responsible official, in accordance with COMAR 26.11.02.02F, that:
  - (a) The proposed change meets the criteria for a minor permit modification, and
  - (b) The Permittee has obtained or applied for all required permits-to-construct required by COMAR 26.11.03.16 with respect to the proposed change;
- (4) Completed forms for the Department to use to notify the EPA and affected states, as required by COMAR 26.11.03.07-.12.

c. Permittee's Ability to Make Change

- (1) For changes proposed as minor permit modifications to this permit that will require the applicant to obtain a permit to construct, the permit to construct must be issued prior to the new change.
- (2) During the period of time after the Permittee applies for a minor modification but before the Department acts in accordance with COMAR 26.11.03.16F(2):
  - (a) The Permittee shall comply with applicable requirements of the Clean Air Act related to the change and the permit terms and conditions described in the application for the minor modification.

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- (b) The Permittee is not required to comply with the terms and conditions in the permit it seeks to modify. If the Permittee fails to comply with the terms and conditions in the application during this time, the terms, and conditions of both this permit and the application for modification may be enforced against it.
- d. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.16 is not within the scope of this regulation.
- e. Minor permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, but only to the extent that the minor permit modification procedures are explicitly provided for in regulations approved by the EPA as part of the Maryland SIP or in other applicable requirements of the Clean Air Act.

**14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS**

**[COMAR 26.11.03.15]**

The Permittee may apply to the department to make an administrative permit amendment as provided in COMAR 26.11.03.15 and in accordance with the following conditions:

- a. An application for an administrative permit amendment shall:
  - (1) Be in writing;
  - (2) Include a statement certified by a responsible official that the proposed amendment meets the criteria in COMAR 26.11.03.15 for an administrative permit amendment, and
  - (3) Identify those provisions of this part 70 permit for which the amendment is requested, including the basis for the request.
- b. An administrative permit amendment:
  - (1) Is a correction of a typographical error;

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- (2) Identifies a change in the name, address, or phone number of a person identified in this permit, or a similar administrative change involving the Permittee or other matters which are not directly related to the control of air pollution;
  - (3) requires more frequent monitoring or reporting by the Permittee;
  - (4) Allows for a change in ownership or operational control of a source for which the Department determines that no other revision to the permit is necessary and is documented as per COMAR 26.11.03.15B(4);
  - (5) Incorporates into this permit the requirements from preconstruction review permits or approvals issued by the Department in accordance with COMAR 26.11.03.15B(5), but only if it satisfies 40 CFR 70.7(d)(1)(v);
  - (6) Incorporates any other type of change, as approved by the EPA, which is similar to those in COMAR 26.11.03.15B(1)—(4);
  - (7) Notwithstanding COMAR 26.11.03.15B(1)—(6), all modifications to acid rain control provisions included in this Part 70 permit are governed by applicable requirements promulgated under Title IV of the Clean Air Act; or
  - (8) Incorporates any change to a term or condition specified as State-only enforceable if the Permittee has obtained all necessary permits-to-construct and approvals that apply to the change.
- c. The Permittee may make the change addressed in the application for an administrative amendment upon receipt by the Department of the application if all permits-to-construct or approvals otherwise required by COMAR 26.11.02 prior to making the change have first been obtained from the Department.
- d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15 , but only after the Department takes final action to revise the permit.

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- e. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.15 is not within the scope of this regulation.

**15. OFF-PERMIT CHANGES TO THIS SOURCE**

**[COMAR 26.11.03.19]**

The Permittee may make off-permit changes to this facility as provided in COMAR 26.11.03.19 and in accordance with the following conditions:

- a. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:
  - (1) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;
  - (2) The change is not subject to any requirements under Title IV of the Clean Air Act;
  - (3) The change is not a Title I modification; and
  - (4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of the permit.
- b. For a change that qualifies under COMAR 26.11.03.19, the Permittee shall provide contemporaneous written notice to the Department and the EPA, except for a change to an emissions unit or activity that is exempt from the Part 70 permit application, as provided in COMAR 26.11.03.04. This written notice shall describe the change, including the date it was made, any change in emissions, including the pollutants emitted, and any new applicable requirements of the Clean Air Act that apply as a result of the change.
- c. Upon satisfying the requirements of COMAR 26.11.03.19, the Permittee may make the proposed change.
- d. The Permittee shall keep a record describing:

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- (1) Changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement of the Clean Air Act , but not otherwise regulated under this permit; and
- (2) The emissions resulting from those changes.
- e. Changes that qualify under COMAR 26.11.03.19 are not subject to the requirements for Part 70 revisions.
- f. The Permittee shall include each off-permit change under COMAR 26.11.03.19 in the application for renewal of the part 70 permit.
- g. The permit shield in COMAR 26.11.03.23 does not apply to off-permit changes made under COMAR 26.11.03.19.
- h. The Permittee is subject to enforcement action if it is determined that an off-permit change made under COMAR 26.11.03.19 is not within the scope of this regulation.

**16. ON-PERMIT CHANGES TO SOURCES**

**[COMAR 26.11.03.18]**

The Permittee may make on-permit changes that are allowed under Section 502(b)(10) of the Clean Air Act as provided in COMAR 26.11.03.18 and in accordance with the following conditions:

- a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:
  - (1) The change is not a Title I modification;
  - (2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;
  - (3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;



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- (4) The change does not violate an applicable requirement of the Clean Air Act;
  - (5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;
  - (6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or condition has been established to limit emissions allowable under this permit;
  - (7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and
  - (8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.
- b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:
- (1) A description of the proposed change;
  - (2) The date on which the change is proposed to be made;
  - (3) Any change in emissions resulting from the change, including the pollutants emitted;
  - (4) Any new applicable requirement of the Clean Air Act; and
  - (5) Any permit term or condition that would no longer apply.
- c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.
- d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.

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- e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.
- f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.
- g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.
- h. The Permittee is subject to enforcement action if it is determined that an on-permit change made under COMAR 26.11.03.18 is not within the scope of the regulation or violates any requirement of the State air pollution control law.

**17. FEE PAYMENT**

**[COMAR 26.11.02.16A(2) & (5)(b)]**

- a. The fee for this Part 70 permit is as prescribed in Regulation .19 of COMAR 26.11.02.
- b. The fee is due on and shall be paid on or before each 12-month anniversary date of the permit.
- c. Failure to pay the annual permit fee constitutes cause for revocation of the permit by the Department.

**18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS**

**[COMAR 26.11.02.09.]**

The Permittee may not construct or modify or cause to be constructed or modified any of the following sources without first obtaining, and having in current effect, the specified permits-to-construct, and approvals:

- a. New Source Review source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

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- b. Prevention of Significant Deterioration source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;
- c. New Source Performance Standard source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;
- d. National Emission Standards for Hazardous Air Pollutants source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;
- e. A stationary source of lead that discharges one ton per year or more of lead or lead compounds measured as elemental lead, permit to construct required, except for generating stations constructed by electric companies;
- f. All stationary sources of air pollution, including installations and air pollution control equipment, except as listed in COMAR 26.11.02.10, permit to construct required;
- g. In the event of a conflict between the applicability of (a.— e.) above and an exemption listed in COMAR 26.11.02.10, the provision that requires a permit applies.
- h. Approval of a PSD or NSR source by the Department does not relieve the Permittee obtaining an approval from also obtaining all permits-to-construct required by (c.— g.) above.

**19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION**

**[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]**

The Permittee may request the Department to authorize special procedures for the Permittee to apply simultaneously, to the extent possible, for a permit to construct and a revision to this permit.

These procedures may provide for combined public notices, informational meetings, and public hearings for both permits but shall not adversely affect the rights of a person, including EPA and affected states, to obtain information about the application for a permit, to comment on an application, or to challenge a permit that is issued.

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These procedures shall not alter any existing permit procedures or time frames.

**20. PROPERTY RIGHTS**

**[COMAR 26.11.03.06E(4)]**

This Part 70 permit does not convey any property rights of any sort, or any exclusive privileges.

**21. SEVERABILITY**

**[COMAR 26.11.03.06A(5)]**

If any portion of this Part 70 permit is challenged, or any term or condition deemed unenforceable, the remainder of the requirements of the permit continues to be valid.

**22. INSPECTION AND ENTRY**

**[COMAR 26.11.03.06G(3)]**

The Permittee shall allow employees and authorized representatives of the Department, the EPA, and local environmental health agencies, upon presentation of credentials or other documents as may be required by law, to:

- a. Enter at a reasonable time without delay and without prior notification the Permittee's property where a Part 70 source is located, emissions-related activity is conducted, or records required by this permit are kept;
- b. Have access to and make copies of records required by the permit;
- c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and

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- d. Sample or monitor any substances or parameters at or related to the emissions units at the facility for the purpose of determining compliance with the permit.

**23. DUTY TO PROVIDE INFORMATION**

**[COMAR 26.11.03.06E(5)]**

The Permittee shall furnish to the Department, within a reasonable time specified by the Department, information requested in writing by the Department in order to determine whether the Permittee is in compliance with the federally enforceable conditions of this Part 70 permit, or whether cause exists for revising or revoking the permit. Upon request, the Permittee shall also furnish to the Department records required to be kept under the permit.

For information claimed by the Permittee to be confidential and therefore potentially not discloseable to the public, the Department may require the Permittee to provide a copy of the records directly to the EPA along with a claim of confidentiality.

The Permittee shall also furnish to the Department, within a reasonable time specified by the Department, information or records requested in writing by the Department in order to determine if the Permittee is in compliance with the State-only enforceable conditions of this permit.

**24. COMPLIANCE REQUIREMENTS**

**[COMAR 26.11.03.06E(1)] and [COMAR 26.11.03.06A(11)] and [COMAR 26.11.02.05]**

The Permittee shall comply with the conditions of this Part 70 permit. Noncompliance with the permit constitutes a violation of the Clean Air Act, and/or the Environment Article Title 2 of the Annotated Code of Maryland and may subject the Permittee to:

- a. Enforcement action,
- b. Permit revocation or revision,
- c. Denial of the renewal of a Part 70 permit, or

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- d. Any combination of these actions.

The conditions in this Part 70 permit are enforceable by EPA and citizens under the Clean Air Act except for the State-only enforceable conditions.

Under Environment Article Section 2-609, Annotated Code of Maryland, the Department may seek immediate injunctive relief against a person who violates this permit in such a manner as to cause a threat to human health or the environment.

**25. CREDIBLE EVIDENCE**

Nothing in this permit shall be interpreted to preclude the use of credible evidence to demonstrate noncompliance with any term of this permit.

**26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE**

**[COMAR 26.11.03.06E(2)]**

The need to halt or reduce activity in order to comply with the conditions of this permit may not be used as a defense in an enforcement action.

**27. CIRCUMVENTION**

**[COMAR 26.11.01.06]**

The Permittee may not install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes emissions which would otherwise constitute a violation of any applicable air pollution control regulation.

**28. PERMIT SHIELD**

**[COMAR 26.11.03.23]**

A permit shield as described in COMAR 26.11.03.23 shall apply only to terms and conditions in this Part 70 permit that have been specifically

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identified as covered by the permit shield. Neither this permit nor COMAR 26.11.03.23 alters the following:

- a. The emergency order provisions in Section 303 of the Clean Air Act, including the authority of EPA under that section;
- b. The liability of the Permittee for a violation of an applicable requirement of the Clean Air Act before or when this permit is issued or for a violation that continues after issuance;
- c. The requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act;
- d. The ability of the Department or EPA to obtain information from a source pursuant to Maryland law and Section 114 of the Clean Air Act; or
- e. The authority of the Department to enforce an applicable requirement of the State air pollution control law that is not an applicable requirement of the Clean Air Act.

**29. ALTERNATE OPERATING SCENARIOS**

**[COMAR 26.11.03.06A(9)]**

For all alternate operating scenarios approved by the Department and contained within this permit, the Permittee, while changing from one approved scenario to another, shall contemporaneously record in a log maintained at the facility each scenario under which the emissions unit is operating and the date and time the scenario started and ended.

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**SECTION III PLANT WIDE CONDITIONS**

**1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION**

**[COMAR 26.11.06.03D]**

The Permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

**2. OPEN BURNING**

**[COMAR 26.11.07]**

Except as provided in COMAR 26.11.07.04, the Permittee shall not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the Permittee shall request and receive approval from the Department.

**3. AIR POLLUTION EPISODE**

**[COMAR 26.11.05.04]**

When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

**4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS**

**[COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]**

The Permittee shall comply with the following conditions for occurrences of excess emissions and deviations from requirements of this permit, including those in Section VI – State-only Enforceable Conditions:



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- a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;
- b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;
- c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR 26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;
- d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.
- e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

**5. ACCIDENTAL RELEASE PROVISIONS**

**[COMAR 26.11.03.03B(23)] and [40 CFR 68]**

The Permittee shall submit risk management plans by the date specified in 40 CFR 68.150.

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The Permittee shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

**6. GENERAL TESTING REQUIREMENTS**

**[COMAR 26.11.01.04]**

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation shall be provided to the Department.

**7. EMISSIONS TEST METHODS**

**[COMAR 26.11.01.04]**

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described below or other test methods submitted to and approved by the Department.

Reference documents of the test methods approved by the Department include the following:

- a. 40 CFR 60, appendix A
- b. 40 CFR 51, appendix M
- c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

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**8. EMISSIONS CERTIFICATION REPORT**

**[COMAR 26.11.01.05-1] and [COMAR 26.11.02.19C] and  
[COMAR 26.11.02.19D]**

The Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

- a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;
- b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:
  - (1) Familiar with each source for which the certifications forms are submitted, and
  - (2) Responsible for the accuracy of the emissions information;
- c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:
  - (1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;
  - (2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;
  - (3) Amounts, types, and analyses of all fuels used;
  - (4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;
  - (5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:

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- (a) Significant maintenance performed,
  - (b) Malfunctions and downtime, and
  - (c) Episodes of reduced efficiency of all equipment;
- (6) Limitations on source operation or any work practice standards that significantly affect emissions; and
- (7) Other relevant information as required by the Department.

**9. COMPLIANCE CERTIFICATION REPORT**

**[COMAR 26.11.03.06G(6) and (7)]**

The Permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of this Part 70 permit including each applicable standard, emissions limitation, and work practice for the previous calendar year by April 1 of each year.

- a. The compliance certification shall include:
  - (1) The identification of each term or condition of this permit which is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether the compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of each source, currently and over the reporting period; and
  - (5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.
- b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

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**10. CERTIFICATION BY RESPONSIBLE OFFICIAL**

**[COMAR 26.11.02.02F]**

All application forms, reports, and compliance certifications submitted pursuant to this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

The certification shall be in the following form:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

**11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING**

**[COMAR 26.11.03.06C(5)]**

The Permittee shall gather and retain the following information when sampling and testing for compliance demonstrations:

- a. The location as specified in this permit, and the date and time that samples and measurements are taken;
- b. All pertinent operating conditions existing at the time that samples and measurements are taken;
- c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;
- d. The identity of the Permittee, individual, or other entity that performed the analysis;
- e. The analytical techniques and methods used; and

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- f. The results of each analysis.

**12. GENERAL RECORDKEEPING**

**[COMAR 26.11.03.06C(6)]**

The Permittee shall retain records of all monitoring data and information that support the compliance certification for a period of five (5) years from the date that the monitoring, sample measurement, application, report, or emissions test was completed or submitted to the Department.

These records and support information shall include:

- a. All calibration and maintenance records;
- b. All original data collected from continuous monitoring instrumentation;
- c. Records which support the annual emissions certification; and
- d. Copies of all reports required by this permit.

**13. GENERAL CONFORMITY**

**[COMAR 26.11.26.09]**

The Permittee shall comply with the general conformity requirements of 40 CFR 93, Subpart B and COMAR 26.11.26.09.

**14. ASBESTOS PROVISIONS**

**[40 CFR 61, Subpart M]**

The Permittee shall comply with 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

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**15. OZONE DEPLETING REGULATIONS**

**[40 CFR 82, Subpart F]**

The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in subpart B:

- a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repairs, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
- d. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.155.
- e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.157.
- f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

**16. ACID RAIN PERMIT**

The Permittee shall comply with the provisions and all applicable requirements of the Phase II Acid Rain Permit. The renewal Phase II Acid Rain Permit is attached as Appendix A.

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**SECTION IV PLANT SPECIFIC CONDITIONS**

This section provides tables that include the emissions standards, emissions limitations, and work practices applicable to each emissions unit located at this facility. The Permittee shall comply with all applicable emissions standards, emissions limitations and work practices included herein.

The tables also include testing, monitoring, record keeping and reporting requirements specific to each emissions unit. In addition to the requirements included here in **Section IV**, the Permittee is also subject to the general testing, monitoring, record keeping, and reporting requirements included in **Section III – Plant Wide Conditions** of this permit.

Unless otherwise provided in the specific requirements for an emissions unit, the Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, all records that the Permittee is required under this section to establish. **[Reference: COMAR 26.11.03.06C(5)(g)]**

<b>Table IV – 1</b>	
<b>1.0</b>	<p><b><u>Emissions Unit Number(s): FSC-BS-Unit 1 and FSC-BS-Unit 2</u></b></p> <p><b>FSC-BS-Unit1 and FSC-BS-Unit2:</b> Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site. The reburning of fly ash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC). Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse, and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. <b>[MDE Reg. Nos. 3-0015 &amp; 3-0016]</b>  <i>(Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).</i></p>
<b>1.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p>A. <u>Control of Visible Emissions</u>  <b>1. COMAR 26.11.09.05 - Visible Emissions.</b>  <b>“A. Fuel Burning Equipment.</b></p>



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**Table IV – 1**

(2) Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

(3) Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:

(a) The visible emissions are not greater than 40 percent opacity; and

(b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.”

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.**

**B. Control of Particulate Matter Emissions**

**1. COMAR 26.11.09.06B:** Areas III and IV. The following apply in Areas III and IV:

(2) Residual Fuel-Oil-Burning Equipment. A person may not cause or permit particulate matter caused by the combustion of residual fuel oil to be discharged into the atmosphere in excess of the amounts shown in Table 1 in Regulation .09 of this chapter.

(3) Solid Fuel Burning Equipment. “A person may not cause or permit particulate matter caused by the combustion of solid fuel to be discharged into the atmosphere in excess of the amounts shown in Table 1.” ***For these units, the maximum allowable emissions of particulate matter 0.03 gr/scfd @ 50% excess air.***

**COMAR 26.11.09.06C. Determination of Compliance (by stack test).**

“Compliance with the particulate matter emissions standards in this regulation shall be calculated as the average of 3 test runs using EPA Test Method 5 or other United States Environmental Protection Agency test method approved by the Department.”

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS**

**3. CPCN – Case No. 9075**

“To avoid triggering the Prevention of Significant Deterioration (PSD) applicability for PM and PM-10 for this Project:

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**Table IV – 1**

(a) Emissions from Brandon Shores Units 1 and 2 each shall not exceed the following:  
 PM/PM-10: **0.015 lb./MMBtu** (filterable), as determined by (1) the average of three stack tests, or (2) if continuous emission monitoring for particulate matter is used to demonstrate compliance, a 24-hour rolling average;  
 Total PM/PM-10: **0.034 lb./MMBtu** (filterable and condensable), as determined by the average of three stack tests.”

**[Reference: CPCN – Case No 9075, Section VII Condition (21)(a)]**

C. Control of Sulfur Oxides

**1. COMAR 26.11.09.07: Control of Sulfur Oxides from Fuel Burning Equipment.**

“**A. Sulfur Content Limitations for Fuel.** A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:

(2) In Areas III and IV:

(a) **All solid fuels, 1.0 percent;**

(b) **Distillate fuel oils, 0.3 percent;** (Note: for No. 2 fuel oil on start-up)

(c) Residual fuel oils, 1.0 percent.”

**C. Request for Analyses.** Any person offering to sell or deliver fuel or any person responsible for equipment in which fuel or process gas is burned, upon request, shall submit to the Department or control officer such analyses of fuel or process gas as may be required to determine compliance with this regulation.”

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS**

**3. Healthy Air Act**

**COMAR 26.11.27.03C. SO<sub>2</sub> Emission Limitations.**

(1) Except as provided in §E of this regulation, annual SO<sub>2</sub> emissions from each affected electric generating unit may not exceed the number of tons in §C(2) of this regulation.

(2) Annual Tonnage Limitations.

Affected Unit	Annual SO <sub>2</sub> Tonnage Limitations Beginning January 1, 2013
Brandon Shores Unit 1	5,392 tons
Brandon Shores Unit 2	5,627 tons

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**COMAR 26.11.27.03E. System-Wide Compliance Determinations.**

(1) Compliance with the emission limitations in §§B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.

(2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§B and C of this regulation.

(3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.

**4. CPCN – Case No. 9075**

PSD-Best Available Control Technology (BACT) for Sulfuric Acid Mist (SAM)

Emissions of SAM shall not exceed **0.027 pounds per million Btu** (3-hour average).

Compliance with this standard will be determined by the average of 3 valid stack test runs using methods approved by the Department.

**[Reference: CPCN Case No. 9075– Section V. condition (17)(b)]**

**5. Acid Rain Provisions**

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

**6. Cross-State Air Pollution Rule**

**See Table IV-14: CSAPR for requirements.**

D. Control of Nitrogen Oxides

**1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT**

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.**

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**Table IV – 1**

**3. Healthy Air Act**

**COMAR 26.11.27.03B. NO<sub>x</sub> Emission Limitations.**

“(1) Except as provided in §E of this regulation, annual NO<sub>x</sub> emissions from each affected electric generating unit may not exceed the number of tons in §B(2) of this regulation.

(2) Annual Tonnage Limitations.

Affected Unit	Annual NO <sub>x</sub> Tonnage Limitations Beginning
	January 1, 2012
Brandon Shores Unit 1	2,414 tons
Brandon Shores Unit 2	2,519 tons

(3) Except as provided in §E of this regulation, ozone season NO<sub>x</sub> emissions from each affected electric generating unit may not exceed the number of tons in §B(4) of this regulation.”

“(6) Ozone Season Tonnage Limitations.

Affected Unit	Ozone Season NO <sub>x</sub> Tonnage Limitations Beginning
	May 1, 2012
Brandon Shores Unit 1	1,124 tons
Brandon Shores Unit 2	1,195 tons

(7) Electric System Reliability During Ozone Seasons.

(a) An exceedance of the NO<sub>x</sub> limitations in §B(4) or (6) of this regulation which occurs because PJM Interconnection, LLC or a successor independent system operator, acts to invoke "Maximum Emergency Generation", "Load Reduction", "Voltage Reduction", "Curtailement of Non-essential Building Load", or "Manual Load Dump" procedures in accordance with the current PJM Manual, or a PJM alert preceding such action as to a generating unit that has temporarily shut down in order to avoid potential interruption in electric service and maintain electric system reliability is not a violation of this chapter provided that:

- (i) Within 36 hours following the action, the owner or operator of the affected electric generating unit or units notifies the Manager of the Air Quality Compliance Program of the action taken by PJM Interconnection and provides the Department with documentation of the action which is satisfactory to the Department;
- (ii) Within 48 hours after completion of the action, the owner or operator of the affected unit or units provides the Department with the estimated NO<sub>x</sub> emissions in excess of the emission limitation; and
- (iii) *See State-only enforceable section of the permit for additional requirement.*

(b) The owner or operator of an electric generating unit or system, as applicable, shall send written notice to the Manager of the Air Quality

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Compliance Program not later than 5 business days following the day when the cumulative ozone season NO<sub>x</sub> emissions of an electric generating unit or system, as applicable, are:

- (i) Equal to approximately 80 percent of the applicable ozone season emission limitation; and
- (ii) Equal to the applicable ozone season emission limitation. “

**COMAR 26.11.27.03E. System-Wide Compliance Determinations.**

“(1) Compliance with the emission limitations in §§B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.

(2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§B and C of this regulation.

(3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.”

**4. Acid Rain Provisions**

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

**5. Cross-State Air Pollution Rule**

**See Table IV-14: CSAPR for requirements.**

E. Control of CO Emissions

**PSD-Best Available Control Technology (BACT) for Carbon Monoxide (CO).**

Emissions of CO shall not exceed **0.2 pounds per million Btu (lb./MMBtu)** (3-hour average). This limit shall be achieved by the application of good combustion practices.

Compliance with this standard will be determined by the average of 3 valid stack test runs using methods approved by the Department.

**[Reference: CPCN Case No. 9075, Section V Condition 17a.]**

F. Control of VOC Emissions

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<b>Table IV – 1</b>	
	<p><b>Lowest Achievable Emission Rate (LAER) for Volatile Organic Compound (VOC)</b>            Emissions of VOC shall not exceed <b>0.0024 lb./MMBtu</b> per unit (3-hour average).            Compliance with this standard will be determined by the average of 3 valid stack test runs using methods approved by the Department.  <b>[Reference: CPCN Case No. 9075, Section VI Condition 19a.]</b></p> <p><u>G. Control of HAP Emissions</u>  <b>See Table IV-13: MACT Subpart UUUUU Requirements.</b></p> <p><u>H. Operational Limits</u>  <b>See Table IV-9b-Boilers Modification.</b></p>
<b>1.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p><u>A. Control of Visible Emissions</u>            1. See Monitoring Requirements.</p> <p><u>B. Control of Particulate Matter Emissions</u>            1. The Permittee, in accordance with COMAR 26.11.01.04A(1), shall conduct annual testing using EPA Reference Methods of 40 CFR Part 60, Appendix A. The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date. Note: The Permittee may petition the Department to use any Method 5 QC/QA testing for the PM CEMS to satisfy the requirement of the annual compliance stack test. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p><b><u>2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.</u></b></p> <p><b>3. CPCN:</b> The Permittee, in accordance with COMAR 26.11.01.04A(1), shall conduct annual testing using EPA Reference Methods of 40 CFR Part 60, Appendix A. The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date. Note: The Permittee may petition the Department to use any Method 5 QC/QA testing for the PM CEMS to satisfy the requirement of the annual compliance stack test. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p><u>C. Control of Sulfur Oxides</u>            1. The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established</p>

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in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].**

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.**

**3. Healthy Air Act**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].**

**4. CPCN**

The Permittee shall perform quality control/ quality assurance procedures on the SO<sub>2</sub> continuous emission monitoring system that is used in conjunction with a data acquisition system in order to continuously monitor SAM emissions. **[Reference: COMAR 26.11.03.06C].**

**5. Acid Rain Provisions**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].**

D. Control of Nitrogen Oxides

**1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT**

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.**

**3. Healthy Air Act**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C]**

**4. Acid Rain Provisions**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. **[Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].**

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<b>Table IV – 1</b>	
	<p><u>E. Control of CO Emissions</u>  <b>PSD-Best Available Control Technology (BACT) for Carbon Monoxide (CO)</b>            The Permittee shall perform quality control/ quality assurance procedures on the CO continuous emission monitoring system. <b>[Reference: CPCN Case No. 9075-Section VIII, Condition 22, 23 and 24].</b></p> <p><u>F. Control of VOC Emissions</u>  <b>Lowest Achievable Emission Rate (LAER) for Volatile Organic Compound (VOC)</b>            The Permittee shall perform quality control/ quality assurance procedures on the CO continuous emission monitoring system that is used in conjunction with a data acquisition system in order to continuously monitor VOC emissions. <b>[Reference: CPCN Case No. 9075-Section VIII, condition 22, 23 and 24].</b></p>
<b>1.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p><u>A. Control of Visible Emissions</u>  <b>1.</b> COMAR 26.11.09.05C, allows for the discontinuation of a COM on fuel burning equipment that is equipped with a flue gas desulfurization device. If operation of the opacity monitor is discontinued, the regulation requires an alternative monitoring plan to be submitted to and approved by the Department which includes a schedule for monthly Method 9 visible emissions observations.</p> <p>As an alternative to the COMAR 26.11.01.10 requirement to use a COM and until an alternate monitoring plan is submitted and approved:            The Permittee shall perform a visible emissions observation using an EPA Reference Method 9 of the exhaust from the scrubber stack. The observation shall be performed once a week for one hour period of time. If after a six-month period time, no violations of the opacity limit are observed, the frequency of observation may be reduced to once per month. At any point in time that a violation of the opacity limit is observed, the observations shall return to the weekly schedule until another six-month period elapses without a violation. <b>[Reference: COMAR 26.11.09.05C &amp; COMAR 26.11.01.10]</b></p> <p><u>B. Control of Particulate Matter Emissions</u>  <b>1.</b> The Permittee shall use reasonable efforts to keep each PM CEMS operating and producing data whenever either Unit served by the PM</p>



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	<p>CEMS is operating. <b>[Reference: COMAR 26.11.06.03C and Condition 25-Consent Decree of June 1,2007]</b></p> <p>Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter concentration in grains per dry standard cubic feet on a 24-hour rolling average basis, unless State or federal law or regulations require a different averaging period or different procedures, in which case, the Permittee shall be subject to applicable state or federal requirements. The Permittee shall maintain, in an electronic database, the average emission values recorded by each PM CEMS. <b>[Reference: COMAR 26.11.06.03C]</b></p> <p><b>2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.</b></p> <p><b>3. CPCN:</b> See Recording Requirement.</p> <p><u>C. Control of Sulfur Oxides</u></p> <p><b>1.</b> “The owner or operator of fuel-burning equipment burning coal, with a heat input capacity of 100 million Btu per hour or greater, shall install CEMs to measure and record sulfur dioxide, nitrogen oxide, either oxygen or carbon dioxide, and flow.” <b>[Reference: COMAR 26.11.01.11B(2)]</b></p> <p>The Permittee shall perform quality control/quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix B. <b>[Reference: COMAR 26.11.01.11D]</b></p> <p><b>2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.</b></p> <p><b>3. Healthy Air Act</b>  <b>COMAR 26.11.27.05 – Monitoring and Reporting Requirements</b>      “A. Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.”</p> <p><b>4. CPCN</b>  <b>PSD-Best Available Control Technology (BACT) for Sulfuric Acid Mist (SAM)</b></p> <p>The Permittee shall operate the boilers in accordance the Operations and Maintenance Plan (the Plan). The Plan shall include a description of good combustion practices and methods to be employed to minimize SAM emissions and methods used to estimate emissions of SAM emissions.</p>
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**Table IV – 1**

In accordance with the Operations and Maintenance Plan, the Permittee shall continuously monitor estimated SAM emissions by using a data acquisition system to collect data from the SO<sub>2</sub> CEM and apply a factor of 0.003 SAM/SO<sub>2</sub> in order to calculate SAM emissions for recordkeeping and reporting purposes. The Permittee may petition the Department to revise the factor based upon the results of additional compliance stack tests.

**[Reference: COMAR 26.11.03.06C and CPCN Case No. 9075, Section V condition (17)(c); Letter dated March 4, 2013: Results of May 2012 stack test]**

**5. Acid Rain Provisions**

The Permittee shall install, certify, operate, and maintain a SO<sub>2</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B - Monitoring Provisions. **[Reference: §75.10(a)(1) and Acid Rain Permit].**

D. Control of Nitrogen Oxides

**1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT**

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.**

**3. Healthy Air Act**

**COMAR 26.11.27.05 – Monitoring and Reporting Requirements**

“A. Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.”

**4. Acid Rain Provisions**

The Permittee shall install, certify, operate, and maintain a NO<sub>x</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B- Monitoring Provisions. **[Reference: §75.10(a)(1) and Acid Rain Permit].**

E. Control of CO Emissions

**PSD-Best Available Control Technology (BACT) for Carbon Monoxide (CO)**

The Permittee shall operate the boilers in accordance the Operations and Maintenance Plan (the Plan). The Plan shall include a description of good combustion practices and methods to be employed to minimize CO

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	<p>emissions and methods used to estimate emissions of CO and SAM emissions.</p> <p>In accordance with the Operations and Maintenance Plan, the Permittee shall continuously monitor CO emissions using a continuous emissions monitor. The Permittee shall perform QC/QA procedures on the CEM system in accordance with facility specific practices and/or those recommended by the CEM manufacturer.  <b>[Reference: COMAR 26.11.03.06C and CPCN Case No. 9075 – June 4, 2007, Section V condition (17)(c)]</b></p> <p>F. <u>Control of VOC Emissions</u>  <b>Lowest Achievable Emission Rate (LAER) for Volatile Organic Compound (VOC)</b>          The Permittee shall operate the boilers in accordance the Operations and Maintenance Plan (the Plan). The Plan shall include a description of good combustion practices and methods to be employed to minimize VOC emissions and methods used to estimate VOC emissions during startup, shutdown, and malfunction of the generating units or associated pollution control systems.</p> <p>In accordance with the Operations and Maintenance Plan, the Permittee shall continuously monitor estimated VOC emissions by using a data acquisition system to collect data from the CO CEM and apply a factor of 0.012 VOC/CO in order to calculate VOC emissions for recordkeeping and reporting purposes. The Permittee may petition the Department to revise the factor based upon the results of additional compliance stack tests.  <b>[Reference: COMAR 26.11.03.06C and CPCN Case No. 9075 – Section VI condition (19)(b)]</b></p>
<b>1.4</b>	<p><b><u>Record Keeping Requirements:</u></b>  <b>Note:</b> All records must be maintained for a period of at least 5 years.  <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p>A. <u>Control of Visible Emissions</u>  <b>1.</b> The Permittee shall maintain all records of Method 9 visible emissions observations. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>B. <u>Control of Particulate Matter Emissions</u></p>

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**1.** The Permittee shall operate and maintain a PM CEMS to produce valid data whenever a Unit is operating. Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter concentration in grains per dry standard cubic feet on a six-hour rolling average. **[Reference: COMAR 26.11.06.03C]**

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.**

**3. CPCN:** The Permittee shall operate and maintain a PM CEMS to produce valid data whenever a Unit is operating. Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter concentrations and calculating emissions in units of lb./MMBtu on a 24-hour rolling average basis. **[Reference: COMAR 26.11.06.03C]**

C. Control of Sulfur Oxides

**1.** The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E. **[Reference: COMAR 26.11.01.11E(2)].**

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.**

**3. Healthy Air Act**

The Permittee shall maintain records sufficient to demonstrate compliance with the requirements of the Healthy Air Act, COMAR 26.11.27. **[Reference: COMAR 26.11.01.05A].**

**4. CPCN**

**PSD Best Available Control Technology (BACT) for Sulfuric Acid Mist (SAM)**

The Permittee shall maintain a record of the data collected by the data acquisition system which calculates SAM emissions on a continuous basis. In addition, the Permittee shall maintain all records necessary to demonstrate compliance with the Operations and Maintenance Plan, including date of occurrence and duration of any startup, shutdown, and malfunctions.

**[Reference: COMAR 26.11.03.06C and CPCN Case No. 9075 – Section V condition 17c. & Section X condition 29.]**

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	<p><b>5. Acid Rain Provisions</b>          The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75. <b>[Reference: See Acid Rain Permit]</b></p> <p><u>D. Control of Nitrogen Oxides</u>  <b>1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT</b></p> <p><b>2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.</b></p> <p><b>3. Healthy Air Act</b>          The Permittee shall maintain records sufficient to demonstrate compliance with the requirements of the Healthy Air Act, COMAR 26.11.27. <b>[Reference: COMAR 26.11.01.05A].</b></p> <p><b>4. Acid Rain Provisions</b>          The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75. <b>[Reference: See Acid Rain Permit]</b></p> <p><u>E. Control of CO Emissions</u>  <b>PSD- Best Available Control Technology (BACT) for Carbon Monoxide (CO).</b>          The Permittee shall maintain a record of the CO CEM readings collected by the data acquisition system. The Permittee shall maintain all records necessary to demonstrate compliance with the Operations and Maintenance Plan, including date of occurrence and duration of any startup, shutdown, and malfunctions.  <b>[Reference: COMAR 26.11.03.06C and CPCN Case No. 9075, Section V condition 17. &amp; Section X condition 29.]</b></p> <p><u>F. Control of VOC Emissions</u>  <b>Lowest Achievable Emission Rate (LAER) for Volatile Organic Compound (VOC)</b>          The Permittee shall maintain a record of the data collected by the data acquisition system which calculates VOC emissions on a continuous basis. The Permittee shall maintain all records necessary to demonstrate compliance with the Operations and Maintenance Plan, including date of occurrence and duration of any startup, shutdown, and malfunctions in the operation of Brandon Shores Units 1 and 2 and associated emissions control equipment.  <b>[Reference: COMAR 26.11.03.06C and CPCN Case No. 9075, Section VI condition 19. &amp; Section X condition 29.]</b></p>
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<b>1.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>  <b>1.</b> The Permittee shall submit to the Department results of visible emissions observations upon request. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>B. <u>Control of Particulate Matter Emissions</u>  <b>1.</b> The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to test and a notice of intent to test at least 10 days prior to the scheduled test date. The Permittee shall submit the results of stack tests in a final report within 60 days from test completion. <b>[Reference: COMAR 26.11.01.04A].</b>           The Permittee shall report to the Department all periods of excess emissions in quarterly PM CEMS reports. All data shall be reported in six hour rolling averages. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p><b><u>2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.</u></b></p> <p><b>3. CPCN:</b> “Final results of each compliance stack test must be submitted to MDE-ARA within 60 days after completion of the test. Analytical data shall be submitted to MDE-ARA directly from the emission testing company.” <b>[Reference: CPCN Case No. 9075 Section X. condition 31]</b></p> <p>The Permittee shall report to the Department all period of excess emissions in quarterly PM CEMS. All data shall be reported in 24 hour rolling averages. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>The Permittee shall submit a report to MDE-ARA to be postmarked by the 30th day following the end of each calendar quarter that summarizes the monthly and consecutive rolling 12-month total emissions of PM, PM<sub>10</sub> separately for each boiler, the material handling operations, and for total emissions of those pollutants from the Brandon Shores facility.” <b>[Reference: CPCN Case No. 9075 Section X. condition 30]</b></p> <p>C. <u>Control of Sulfur Oxides</u>  <b>1.</b> “(1) CEM System Downtime Reporting Requirements.</p>
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	<p>(a) All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the breakdown.</p> <p>(b) The system breakdown report required by §E(1)(a) of this regulation shall include the reason, if known, for the breakdown and the estimated period of time that the CEM will be down. The owner or operator of the CEM shall notify the Department by telephone when an out-of-service CEM is back in operation and producing data that has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in COMAR 26.11.31, and is producing data.</p> <p>(2) <u>CEM Data Reporting Requirements.</u></p> <p>(a) All test results shall be reported in a format approved by the Department.</p> <p>(b) Certification testing shall be repeated when the Department determines that the CEM data may not meet performance specifications because of component replacement or other conditions that affect the quality of generated data.</p> <p>(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:</p> <ul style="list-style-type: none"> <li>(i) The cause, time periods, and magnitude of all emissions which exceed the applicable emission standards;</li> <li>(ii) The source downtime including the time and date of the beginning and end of each downtime period and whether the source downtime was planned or unplanned;</li> <li>(iii) The time periods and cause of all CEM downtime including records of any repairs, adjustments, or maintenance that may affect the ability of the CEM to meet performance specifications of emission data;</li> <li>(iv) Quarterly totals of excess emissions, installation downtime, and CEM downtime during the calendar quarter;</li> <li>(v) Quarterly quality assurance activities;</li> <li>(vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status; and</li> <li>(vii) Other information required by the Department that is determined to be necessary to evaluate the data, to ensure that compliance is achieved, or to determine the applicability of this regulation.</li> </ul> <p>(d) All information required by this regulation to be reported to the Department shall be retained and made available for review by the Department for a minimum of 2 years from the time the report is submitted." <b>[Reference: COMAR 26.11.01.11E]</b></p>
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**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.**

**3. Healthy Air Act**

**COMAR 26.11.27.05 – Monitoring and Reporting Requirements**

“B. Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.

C. Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department.”

**4. CPCN**

**PSD-Best Available Control Technology (BACT) for Sulfuric Acid Mist (SAM)**

1. “CPSG (now Raven Power Fort Smallwood Complex LLC) shall submit a report to MDE-ARA to be postmarked by the 30th day following the end of each calendar quarter that:

- a) Summarizes separately the date, time, and duration of each startup, shutdown, or malfunction that occurred at Brandon Shores Units 1 and 2 and associated pollution control equipment during the prior period for the purposes of complying with BACT and LAER. The report shall include total monthly and consecutive 12-month total hours of startup, shutdown, and malfunction for each unit;
- b) Summarizes the monthly and consecutive rolling 12-month total emissions of PM, PM<sub>10</sub>, **SO<sub>2</sub>**, NO<sub>x</sub>, CO, VOCs, and **SAM** separately for each boiler, the material handling operations, and for total emissions of those pollutants from the Brandon Shores facility.”

2. The Permittee shall report to the Department within 30 days after the end of each calendar quarter, any 3-hour block average estimated SAM emission values calculated by the DAS in accordance with the O&M Plan that were greater than 0.027 pounds per MMBtu while the unit was burning primary fuel.



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**[Reference: COMAR 26.11.03.06C and CPCN Case No. 9075 Section X. condition 30]**

**5. Acid Rain Provisions**

The Permittee shall comply with the reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. **[Reference: See the Acid Rain Permit]**

D. Control of Nitrogen Oxides

**1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT**

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS): See Table IV-1a: NSPS.**

**3. Healthy Air Act**

**COMAR 26.11.27.05 – Monitoring and Reporting Requirements**

“B. Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.

C. Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department.”

**4. Acid Rain Provisions**

The Permittee shall comply with the reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. **[Reference: See the Acid Rain Permit]**

**5. Additional reporting-CPCN 9075**

The Permittee shall submit a report to MDE-ARA to be postmarked by the 30th day following the end of each calendar quarter that summarizes the monthly and consecutive rolling 12-month total emissions of NO<sub>x</sub> separately for each boiler and for total emissions of NO<sub>x</sub> from the Brandon Shores facility.”

**[Reference: CPCN Case No. 9075 Section X. condition 30]**

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**E. Control of CO Emissions**

**PSD-Best Available Control Technology (BACT) for Carbon Monoxide (CO).**

**CPCN Brandon Shores Facility-wide Reporting Requirement**

1. The Permittee shall submit a report to MDE-ARA to be postmarked by the 30th day following the end of each calendar quarter that:

- a) Summarizes separately the date, time, and duration of each startup, shutdown, or malfunction that occurred at Brandon Shores Units 1 and 2 and associated pollution control equipment during the prior period for the purposes of complying with BACT and LAER. The report shall include total monthly and consecutive 12-month total hours of startup, shutdown, and malfunction for each unit;
- b) Summarizes the monthly and consecutive rolling 12-month total emissions of PM, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, **CO**, VOCs, and SAM separately for each boiler, the material handling operations, and for total emissions of those pollutants from the Brandon Shores facility.

**[Reference: CPCN Case No. 9075, Section X. condition 30]**

2. If additional tests are requested, the Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to test and a notice of intent to test at least 10 days prior to the scheduled test date. The Permittee shall submit the results of stack tests in a final report within 60 days from test completion. Analytical data shall be submitted to MDE-ARA directly from the emission testing company.

**[Reference: COMAR 26.11.01.04A]**

3. Unless otherwise instructed by MDE, all air quality notifications and reports required by this CPCN shall be submitted to:

Administrator, Compliance Program  
Air and Radiation Administration  
1800 Washington Boulevard  
Baltimore, Maryland 21230

**[Reference: Case No. 9075, Section X condition 35]**

4. The Permittee shall report to the Department within 30 days after the end of each calendar quarter, any 3-hour block average estimated CO emission values calculated by the DAS in accordance with the O&M Plan that were greater than 0.2 pounds per MMBtu while the unit was burning primary fuel.

**[Reference; COMAR 26.11.03.06C]**

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<b>Table IV – 1</b>	
	<p><u>F. Control of VOC Emissions</u>  <b>Lowest Achievable Emission Rate (LAER) for Volatile Organic Compound (VOC)</b>            See Reporting requirements for CO Emissions above; and            The Permittee shall report to the Department within 30 days after the end of each calendar quarter, any 3-hour block average estimated VOC emission values calculated by the DAS in accordance with the O&amp;M Plan that were greater than 0.0024 pounds per MMBtu while the unit was burning primary fuel.  <b>[Reference: COMAR 26.1.03.06C and CPCN Case No. 9075, Section X. condition 30]</b></p> <p><u>G. Control of HAPs Emissions</u>  <b>See Table IV-13 for MACT Requirements</b></p>

**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

<b>Table IV – 1a: NSPS</b>	
<b>1a.0</b>	<p><b><u>Emissions Unit Number(s): FSC-BS-Unit 1 and FSC-BS-Unit 2 (Cont'd)</u></b></p> <p><b>FSC-BS-Unit1 and FSC-BS-Unit2:</b> Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site.  <b>[MDE Reg. Nos. 3-0015 &amp; 3-0016]</b>  <i>(Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).</i></p>
<b>1a.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p>A. <u>Control of Visible Emissions</u>  <b>2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS)</b>  <u>Note</u> : Units1 and 2 have continuous emission monitors for particulate matter (PEMS). Subpart D allows such units to comply with the PM standard of <b>§60.42Da</b> which exempts an opacity standard.</p>

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**Table IV – 1a: NSPS**

**§60.42Da - Standards for particulate matter (PM).**

“(b) Except as provided in paragraphs (b)(1) and (b)(2) of this section, on and after the date the initial PM performance test is completed or required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility shall not cause to be discharged into the atmosphere any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(1) An owner or operator of an affected facility that elects to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart is **exempt** from the opacity standard specified in this paragraph (b) of this section.”

**B. Control of Particulate Matter Emissions**

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS)**

**§60.42 - Standard for particulate matter (PM).**

“(a) Except as provided under paragraphs (b), (c), (d), and (e) of this section, on and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that:

(1) Contain PM in excess of 43 nanograms per joule (ng/J) heat input (0.10 lb./MMBtu) derived from fossil fuel or fossil fuel and wood residue.”

“(c) As an alternate to meeting the requirements of paragraph (a) of this section, an owner or operator that elects to install, calibrate, maintain, and operate a continuous emissions monitoring systems (CEMS) for measuring PM emissions can petition the Administrator (in writing) to comply with §60.42Da(a) of subpart Da of this part. If the Administrator grants the petition, the source will from then on (unless the unit is modified or reconstructed in the future) have to comply with the requirements in §60.42Da(a) of subpart Da of this part.”

**§60.48Da - Compliance provisions.**

“(a) For affected facilities for which construction, modification, or reconstruction commenced before May 4, 2011, the applicable PM emissions limit and opacity standard under §60.42Da, SO<sub>2</sub> emissions limit under §60.43Da, and NO<sub>x</sub> emissions limit under §60.44Da apply at all times except during periods of startup, shutdown, or malfunction.....”

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**Table IV – 1a: NSPS**

**§60.42Da - Standards for particulate matter (PM).**

“(a) Except as provided in paragraph (f) of this section, on and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility shall not cause to be discharged into the atmosphere from any affected facility for which construction, reconstruction, or modification commenced before March 1, 2005, any gases that contain PM in excess of 13 ng/J (0.03 lb./MMBtu) heat input.”

**C. Control of Sulfur Oxides Emissions**

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS)**

**§60.43 - Standard for sulfur dioxide (SO<sub>2</sub>).**

“(a) Except as provided under paragraph (d) of this section, on and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that contain SO<sub>2</sub> in excess of:

(1) 340 ng/J heat input (0.80 lb./MMBtu) derived from liquid fossil fuel or liquid fossil fuel and wood residue.

(2) 520 ng/J heat input (1.2 lb./MMBtu) derived from solid fossil fuel or solid fossil fuel and wood residue, except as provided in paragraph (e) of this section.”

“(c) Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels.

**D. Control of Nitrogen Oxides Emissions**

**2. 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS)**

**§60.44 - Standard for nitrogen oxides (NO<sub>x</sub>).**

“(a) Except as provided under paragraph (e) of this section, on and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that contain NO<sub>x</sub>, expressed as NO<sub>2</sub> in excess of:

(2) 129 ng/J heat input (0.30 lb./MMBtu) derived from liquid fossil fuel, liquid fossil fuel and wood residue, or gaseous fossil fuel and wood residue.

(3) 300 ng/J heat input (0.70 lb./MMBtu) derived from solid fossil fuel or solid fossil fuel and wood residue (except lignite or a solid fossil fuel containing 25 percent, by weight, or more of coal refuse).”

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<b>Table IV – 1a: NSPS</b>	
<b>1a.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>          See Particulate Matter Monitoring Requirements.</p> <p>B. <u>Control of Particulate Matter Emissions</u>  <b>§60.49Da - Emission monitoring.</b>          “(v) The owner or operator of an affected facility using a CEMS measuring PM emissions to meet requirements of this subpart shall install, certify, operate, and maintain the CEMS as specified in paragraphs (v)(1) through (v)(4) of this section.          (1) The owner or operator shall conduct a performance evaluation of the CEMS according to the applicable requirements of §60.13, Performance Specification 11 in appendix B of this part, and procedure 2 in appendix F of this part.          (2) During each PM correlation testing run of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O<sub>2</sub> (or CO<sub>2</sub>) data shall be collected concurrently (or within a 30- to 60-minute period) by both the CEMS and performance tests conducted using the following test methods.          (i) For PM, Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall be used; and          (ii) For O<sub>2</sub> (or CO<sub>2</sub>), Method 3A or 3B of appendix A-2 of this part, as applicable shall be used.          (3) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually, and Response Correlation Audits must be performed every 3 years.          (4) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in §60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (<i>i.e.</i>, reference method) data and performance test (<i>i.e.</i>, compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see <a href="http://www.epa.gov/ttn/chief/ert/ert_tool.html">http://www.epa.gov/ttn/chief/ert/ert_tool.html</a>) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFire database.”</p>

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<b>Table IV – 1a: NSPS</b>	
	<p><b>C. <u>Control of Sulfur Oxides</u></b>            The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. <b>[Reference: 40 CFR Part 75, Appendix A &amp; COMAR 26.11.03.06C].</b></p> <p><b>D. <u>Control of Nitrogen Oxides</u></b>            The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. <b>[Reference: 40 CFR Part 75, Appendix A &amp; COMAR 26.11.03.06C]</b></p>
<b>1a.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p><b>A. <u>Control of Visible Emissions</u></b>            See Particulate Matter Monitoring Requirements.</p> <p><b>B. <u>Control of Particulate Matter Emissions</u></b>  <b>§60.49Da - Emission monitoring.</b>            “(s) The owner or operator shall prepare and submit to the Administrator for approval a unit-specific monitoring plan for each monitoring system, at least 45 days before commencing certification testing of the monitoring systems. The owner or operator shall comply with the requirements in your plan. The plan must address the requirements in paragraphs (s)(1) through (6) of this section.            (1) Installation of the CEMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of the exhaust emissions (e.g., on or downstream of the last control device);            (2) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems.            (3) Performance evaluation procedures and acceptance criteria (e.g., calibrations, relative accuracy test audits (RATA), etc.);            (4) Ongoing operation and maintenance procedures in accordance with the general requirements of §60.13(d) or part 75 of this chapter (as applicable);            (5) Ongoing data quality assurance procedures in accordance with the general requirements of §60.13 or part 75 of this chapter (as applicable); and            (6) Ongoing recordkeeping and reporting procedures in accordance with the requirements of this subpart.”</p>

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<b>Table IV – 1a: NSPS</b>	
	<p>C. <u>Control of Sulfur Oxides</u>  <b>§60.45 - Emissions and fuel monitoring</b>  <b>(a)</b> “Each owner or operator of an affected facility subject to the applicable emissions standard shall install, calibrate, maintain, and operate continuous opacity monitoring system (COMS) for measuring opacity and a continuous emissions monitoring system (CEMS) for <b>measuring SO<sub>2</sub> emissions</b>, NO<sub>x</sub> emissions, and either oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) except as provided in paragraph (b) of this section.”</p> <p>D. <u>Control of Nitrogen Oxides</u>  <b>§60.45 - Emissions and fuel monitoring</b>  <b>(a)</b> “Each owner or operator of an affected facility subject to the applicable emissions standard shall install, calibrate, maintain, and operate continuous opacity monitoring system (COMS) for measuring opacity and a continuous emissions monitoring system (CEMS) for <b>measuring SO<sub>2</sub> emissions, NO<sub>x</sub> emissions</b>, and either oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) except as provided in paragraph (b) of this section.”</p>
<b>1a.4</b>	<p><b><u>Record Keeping Requirements:</u></b>  <b>Note:</b> All records must be maintained for a period of at least 5 years.  <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p>A. <u>Control of Visible Emissions</u>          See Particulate Matter Record Keeping Requirements.</p> <p>B. <u>Control of Particulate Matter Emissions</u>  <b>§60.7- Notification and record keeping</b>          “(f) Any owner or operator subject to the provisions of this part shall 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.”</p> <p>C. <u>Control of Sulfur Oxides</u>  <b>§60.7- Notification and record keeping</b></p>



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	<p>“(f) Any owner or operator subject to the provisions of this part shall 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.”</p> <p><b>D. <u>Control of Nitrogen Oxides</u></b>  <b>§60.7- <u>Notification and record keeping</u></b>  “(f) Any owner or operator subject to the provisions of this part shall 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.”</p>
<b>1a.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><b>A. <u>Control of Visible Emissions</u></b>  See Particulate Matter Reporting Requirements.</p> <p><b>B. <u>Control of Particulate Matter Emissions</u></b>  <b>§60.45 - <u>Emissions and fuel monitoring.</u></b>  “(g) Excess emission and monitoring system performance reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in §60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:</p> <p>(4) <i>Particulate matter.</i> Excess emissions for affected facilities using a CEMS for measuring PM are defined as any boiler operating day period during which the average emissions (arithmetic average of all operating one-hour periods) exceed the applicable standards in §60.42. <b>Affected facilities using PM CEMS must follow the most current applicable compliance and monitoring provisions in §§60.48Da and 60.49Da of subpart Da of this part.</b>”</p>

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**Table IV – 1a: NSPS**

**C. Control of Sulfur Oxides**

**§60.45 - Emissions and fuel monitoring.**

“(g) Excess emission and monitoring system performance reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in §60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

(2) *Sulfur dioxide*. Excess emissions for affected facilities are defined as:

(i) For affected facilities electing not to comply with §60.43(d), any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of SO<sub>2</sub> as measured by a CEMS exceed the applicable standard in §60.43; or

(ii) For affected facilities electing to comply with §60.43(d), any 30 operating day period during which the average emissions (arithmetic average of all one-hour periods during the 30 operating days) of SO<sub>2</sub> as measured by a CEMS exceed the applicable standard in §60.43.

Facilities complying with the 30-day SO<sub>2</sub> standard shall use the most current associated SO<sub>2</sub> compliance and monitoring requirements in §§60.48Da and 60.49Da of subpart Da of this part or §§60.45b and 60.47b of subpart Db of this part, as applicable.”

**D. Control of Nitrogen Oxides**

**§60.45 - Emissions and fuel monitoring.**

“(g) Excess emission and monitoring system performance reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in §60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

(3) *Nitrogen oxides*. Excess emissions for affected facilities using a CEMS for measuring NO<sub>x</sub> are defined as:

(i) For affected facilities electing not to comply with §60.44(e), any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards in §60.44; or

(ii) For affected facilities electing to comply with §60.44(e), any 30 operating day period during which the average emissions (arithmetic average of all one-hour periods during the 30 operating days) of NO<sub>x</sub> as

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	measured by a CEMS exceed the applicable standard in §60.44. Facilities complying with the 30-day NO <sub>x</sub> standard shall use the most current associated NO <sub>x</sub> compliance and monitoring requirements in §§60.48Da and 60.49Da of subpart Da of this part.”

“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

<b>Table IV – 2</b>	
<b>2.0</b>	<p><b><u>Emissions Unit Number(s): FSC-BS-AuxBlr1 and FSC-BS-AuxBlr2</u></b></p> <p><b>FSC-BS-AuxBlr1 and FSC-BS-AuxBlr2:</b> Two (2) No. 2 oil-fired Auxiliary Boilers used for supplying steam to Brandon Shores Station. <b>[MDE Reg. Nos. 4-0507 &amp; 4-0508]</b></p> <p><i>FSC-BS-AuxBlr1 received permit to construct in 2022 to add natural gas firing capability; modification expected to be completed by Dec 31,2025.</i></p>
<b>2.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p>A. <u>Control of Visible Emissions</u>  <b>COMAR 26.11.09.05A(2) – Fuel Burning Equipment</b>          “Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.”  <b>COMAR 26.11.09.05A(3) - Exceptions.</b> “Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:          (a) The visible emissions are not greater than 40 percent opacity; and          The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.”</p> <p>B. <u>Control of Sulfur Oxides Emissions</u>  <b>COMAR 26.11.09.07: Control of Sulfur Oxides From Fuel Burning Equipment.</b>          “A. Sulfur Content Limitations for Fuel. A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:</p>

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<b>Table IV – 2</b>	
	<p>(2) In Areas III and IV:            (a) All solid fuels, 1.0 percent;  <b>(b) Distillate fuel oils, 0.3 percent;</b>            (c) Residual fuel oils, 1.0 percent.”  <b>C. <u>Request for Analyses.</u></b> Any person offering to sell or deliver fuel or any person responsible for equipment in which fuel or process gas is burned, upon request, shall submit to the Department or control officer such analyses of fuel or process gas as may be required to determine compliance with this regulation.”</p> <p><b>C. <u>Control of Nitrogen Oxides Emissions</u></b>  <b>COMAR 26.11.09.08G – Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 percent or less and Combustion Turbines with a Capacity Factor Greater than 15 percent.</b> “A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:            (a) Provide certification of the capacity factor of the equipment to the Department in writing;            (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;            (c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;            (d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and            (e) Maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request.”</p> <p><b>D. <u>Control of HAPs Emissions:</u></b>  <b>See Table IV-2a-Boiler MACT Subpart DDDDD.</b></p> <p><b>E. <u>Operational Limits</u></b>  <b>See Table IV-9b-Boilers Modification.</b></p>
<b>2.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p><b>A. <u>Control of Visible Emissions</u></b>            See Monitoring Requirements.</p>

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<b>Table IV – 2</b>	
	<p>B. <u>Control of Sulfur Oxides</u>            See Monitoring Requirements.</p> <p>C. <u>Control of Nitrogen Oxides</u>            The Permittee shall perform a combustion analysis and optimize combustion at least once annually for any of the auxiliary boiler that operates more than 500 hours during a calendar year. <b>[Reference: COMAR 26.11.09.08G(1)(b)]</b></p>
<b>2.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>            The Permittee shall verify that there are no visible emissions when burning No. 2 fuel oil. An observer shall perform an EPA Reference Method 9 observation of stack emissions for 18-minute period once every 168 block hours of operation on oil or at a minimum once per year. This requirement is waived if the total hours of operation of a boiler are less than 100 hours in any calendar year.            The Permittee shall perform the following if emissions are visible to human observer:            (a) inspect combustion control system and boiler operations,            (b) perform all necessary adjustments and/or repairs to the boiler within 48 hours of operation so that visible emissions are eliminated; and            (c) document in writing the results of inspections, adjustments and/or repairs to the auxiliary boiler.            The Permittee shall after 48 hours of operation, if the required adjustments and/or repairs had not eliminated the visible emissions, perform a Method 9 observation once daily when the boiler is operating on No.2 fuel oil for an 18-minute period until corrective action have eliminated visible emissions. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>B. <u>Control of Sulfur Oxides</u>            The Permittee shall obtain fuel supplier certification which verify that the fuel oil is in compliance with the sulfur content in the fuel oil limitation or obtain sulfur in fuel analyses of oil that is representative of the oil burned. <b>[Reference: COMAR 26.11.03.06C].</b></p> <p>C. <u>Control of Nitrogen Oxides</u>            The Permittee shall calculate the capacity factor of the auxiliary boilers for each calendar year within 30 days after the end of each year. <b>[Reference: COMAR 26.11.03.06C].</b></p>

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<b>Table IV – 2</b>	
<b>2.4</b>	<p><b><u>Record Keeping Requirements:</u></b>  <b>Note:</b> All records must be maintained for a period of at least 5 years.  <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p>A. <u>Control of Visible Emissions</u>          The Permittee shall maintain records of all visible emissions observations for a period of at least 5 years. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>B. <u>Control of Sulfur Oxides</u>          The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with the sulfur content in the fuel limitation or the sulfur in fuel analyses must be maintained for at least 5 years.  <b>[Reference: COMAR 26.11.09.07C].</b></p> <p>C. <u>Control of Nitrogen Oxides</u>          The Permittee shall maintain the following on site and make available to the Department upon request:</p> <ul style="list-style-type: none"> <li>• Records of the calculated capacity factors.</li> <li>• Records of hours of operation.</li> <li>• Records of the results of the combustion analyses performed if the hours of operation exceed 500.</li> <li>• Record of training program attendance for each operator.</li> </ul> <p><b>[Reference: COMAR 26.11.02.19C(1)(b), COMAR 26.11.03.06C, COMAR 26.11.09.08G(1)(c), &amp; COMAR 26.11.09.08G(1)(e)].</b></p>
<b>2.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>          The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, Plant Wide Condition, “Report of Excess Emissions and Deviations” <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>B. <u>Control of Sulfur Oxides</u>          The Permittee shall submit fuel supplier certification report or fuel analyses if requested by the Department. <b>[Reference: COMAR 26.11.09.07C].</b></p> <p>C. <u>Control of Nitrogen Oxides</u>          The Permittee shall provide certification of the capacity factor of the equipment to the Department with support documentation in Annual</p>

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<b>Table IV – 2</b>	
	<p>Emissions certification Report. [Reference: COMAR 26.11.03.06C &amp; COMAR 26.11.09.08G(1)(a)].</p> <p>The Permittee shall submit a list of trained operators to the Department upon request. [Reference: COMAR 26.11.09.08G(1)(e) and COMAR 26.11.03.06C].</p>

**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

<b>Table IV – 2a – MACT Subpart DDDDD</b>	
<b>2a.0</b>	<p><b><u>Emissions Unit Number(s): FSC-BS-AuxBlr1 and FSC-BS-AuxBlr2 (Cont'd)</u></b></p> <p><b>FSC-BS-AuxBlr1 and FSC-BS-AuxBlr2:</b> Two (2) No. 2 oil-fired Auxiliary Boilers used for supplying steam to Brandon Shores Station. [MDE Reg. Nos. 4-0507 &amp; 4-0508]  <i>FSC-BS-AuxBlr1 received permit to construct in 2022 to add natural gas firing capability; modification expected to be completed by Dec 31,2025.</i></p>
<b>2a.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p><u>Control of HAPs Emissions</u>  <b>40 CFR Part 63, Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters</b>  <b>§63.7485 - Am I subject to this subpart?</b>          You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of HAP, except as specified in §63.7491. For purposes of this subpart, a major source of HAP is as defined in §63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in §63.7575.</p> <p><b>§63.7495 - <u>When do I have to comply with this subpart?</u></b>          “(a) If you have a new or reconstructed boiler or process heater, you must comply with this subpart by April 1, 2013, or upon startup of your boiler or process heater, whichever is later.”</p>

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**Table IV – 2a – MACT Subpart DDDDD**

“(b) If you have an **existing boiler** or process heater, you must comply with this subpart no later than **January 31, 2016**, except as provided in §63.6(i).”

“(d) You must meet the notification requirements in §63.7545 according to the schedule in §63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.”

**§63.7500 - What emission limitations, work practice standards, and operating limits must I meet?**

“(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

**(3)** At all times, you must operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.”

“(c) **Limited-use boilers** and process heaters must complete a tune-up every 5 years as specified in §63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.”

**Limited-use boiler** or process heater means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable average annual capacity factor of no more than 10 percent.

**[Reference: §63.7575-What definitions apply to this subpart?]**

Operational Limit

In order to meet the definition of a “Limited–use boiler” under 40 CFR Part 63, Subpart DDDDD, the Permittee shall limit the annual capacity factor, as defined in §63.7575, for **FSC-BS-AuxBlr1 and FSC-BS-AuxBlr2** to no more than 10 percent.



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<b>Table IV – 2a – MACT Subpart DDDDD</b>	
<b>2a.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p><u>Control of HAPs Emissions</u>  <b>§63.7510 - What are my initial compliance requirements and by what date must I conduct them?</b></p> <p>“(e) For existing affected sources (as defined in §63.7490), you must complete the initial compliance demonstration, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the compliance date that is specified for your source in §63.7495 and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in §63.7540(a)(10)(i) through (vi) no later than the compliance date specified in §63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in §63.7495.</p> <p><b>Note:</b> Limited use boilers are exempt from the energy assessment requirement.</p> <p><b>§63.7515 - When must I conduct subsequent performance tests, fuel analyses, or tune-ups?</b></p> <p>“(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to §63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in §63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in §63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in §63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in §63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after the initial startup of the new or reconstructed affected source.”</p>
<b>2a.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p><u>Control of HAPs Emissions</u>  <b>§63.7525 - What are my monitoring, installation, operation, and maintenance requirements?</b></p>

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**Table IV – 2a – MACT Subpart DDDDD**

“(k) For each unit that meets the definition of limited-use boiler or process heater, you must keep fuel use records for the days the boiler or process heater was operating.”

**§63.7530 - How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?**

“(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.7545(e).”

**Continuous Compliance Requirements**

**§63.7540 - How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?**

“(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 13 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.”

“(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. **This frequency does not apply to limited-use boilers and process heaters, as defined in §63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.**

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

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<b>Table IV – 2a – MACT Subpart DDDDD</b>	
	<p>(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;</p> <p>(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO<sub>x</sub> requirement to which the unit is subject;</p> <p>(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and</p> <p>(vi) Maintain on-site and submit, if requested by the Administrator, report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,</p> <p>(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;</p> <p>(B) A description of any corrective actions taken as a part of the tune-up; and</p> <p>(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.”</p> <p>(12) If your boiler.....meets the definition of <b>limited-use boiler</b> or process heater in §63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months...</p>
<b>2a.4</b>	<p><b><u>Record Keeping Requirements:</u></b>  <b><u>Note:</u></b> All records must be maintained for a period of 5 years. <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p><u>Control of HAPs Emissions</u>  <b><u>Notification, Reports, and Records</u></b>  <b><u>§63.7555 - What records must I keep?</u></b></p>

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<b>Table IV – 2a – MACT Subpart DDDDD</b>	
	<p>“(a) You must keep records according to paragraphs (a)(1) and (2) of this section.            (1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).            (2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in §63.10(b)(2)(viii).            (3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.”</p> <p><b>§63.7560 - <u>In what form and how long must I keep my records?</u></b>            “(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).            (b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.            (c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years.”</p>
<b>2a.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><u>Control of HAPs Emissions</u>  <b><u>Notification, Reports, and Records</u></b>  <b>§63.7545 - <u>What notifications must I submit and when?</u></b>            “(a) You must submit to the Administrator all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.            (c) As specified in §63.9(b)(4) and (5), if you startup your new or reconstructed affected source on or after January 31, 2013, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source. For a new or reconstructed affected source that has reclassified to major source status, you must submit an Initial Notification not later 120 days after the source becomes subject to this subpart.</p>

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**Table IV – 2a – MACT Subpart DDDDD**

“(e) If you are required to conduct an initial compliance demonstration as specified in §63.7530, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8), as applicable. If you are not required to conduct an initial compliance demonstration as specified in §63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) and must be submitted within 60 days of the compliance date specified at §63.7495(b).”

“(8) In addition to the information required in §63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) “This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR part 63 subpart DDDDD at this site according to the procedures in §63.7540(a)(10)(i) through (vi).”

**§63.7550 - What reports must I submit and when?**

“(a) You must submit each report in Table 9 to this subpart that applies to you.

You must submit a(n)	The report must contain	You must submit the report
1. Compliance report	a. Information required in §63.7550(c)(1) through (5); and	Semiannually, annually, biennially, or every 5 years according to the requirements in §63.7550(b).

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. **For units that are subject only to a requirement to conduct an annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as**

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**Table IV – 2a – MACT Subpart DDDDD**

**specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.**

(1) The first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in §63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in §63.7495.

(2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in §63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. **Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.**

(4) Each subsequent compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. **Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.**

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to the requirements of a tune up, they must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of this section, (xiv) and (xvii) of this section, and paragraph (c) (5)(iv) of this section for limited-use boiler or process heater.

“(5)(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) The total operating time during the reporting period.”

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<b>Table IV – 2a – MACT Subpart DDDDD</b>	
	<p>“(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, <b>or 5-year tune-up</b> according to §63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.”</p> <p>“(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.”</p> <p>“(3) You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA’s CDX). You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<a href="http://www.epa.gov/ttn/chief/cedri/index.html">http://www.epa.gov/ttn/chief/cedri/index.html</a>), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.”</p>

**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

<b>Table IV – 3</b>	
<b>3.0</b>	<p><b><u>Emissions Unit Number(s): FSC-BS-MH</u></b></p> <p>The Brandon Shores material handling system consists of various equipment and processes to transport coal, fly ash, hydrated lime or equivalent, powdered activated carbon and other materials. There are facilities to mix coal with additives to reduce stack emissions. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment. <b>[MDE Reg. No.6-1143]</b></p>
<b>3.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p>A. <u>Control of Visible Emissions</u>  <b>COMAR 26.11.06.02C. - Visible Emission Standards.</b></p>

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**Table IV – 3**

“(2) In Areas III and IV a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.”

**COMAR 26.11.06.02A(2)** “The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications or adjustments, or occasional cleaning of control equipment, if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period.”

**Note:** *The VE limit applies only to confined sources which include coal and fly ash storage silos.*

**B. Control of Particulate Matter Emissions**

**1. COMAR 26.11.06.03B. - Particulate Matter from Confined Sources.**

“(2) Areas III and IV. (a) A person may not cause or permit to be discharged into the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD (68.7 mg/dscm).”

**2. COMAR 26.11.06.03 C - Particulate Matter from Unconfined Sources.**

(1) A person may not cause or permit emissions from an unconfined source without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, when appropriate as determined by the Department, the installation and use of hoods, fans, and dust collectors to enclose, capture, and vent emissions. In making this determination, the Department shall consider technological feasibility, practicality, economic impact, and the environmental consequences of the decision.

**3. COMAR 26.11.06.03D - Particulate Matter from Materials Handling and Construction.**

A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

**C. 40 CFR Part 60, Subpart Y—Standards of Performance for Coal Preparation and Processing Plants**

**§60.254 - Standards for coal processing and conveying equipment, coal storage systems, transfer and loading systems, and open storage piles.**



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<b>Table IV – 3</b>	
	<p>“(b) On and after the date on which the performance test is conducted or required to be completed under §60.8, whichever date comes first, an owner or operator of any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified after April 28, 2008, must meet the requirements in paragraphs (b)(1) through (3) of this section, as applicable to the affected facility.</p> <p>(1) Except as provided in paragraph (b)(3) of this section, the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit 10 percent opacity or greater.</p> <p>(2) The owner or operator must not cause to be discharged into the atmosphere from any mechanical vent on an affected facility gases which contain particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf).</p> <p>(3) Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of paragraph (b)(1) of this section.”</p> <p><b>Note:</b> <i>This limit only applies to the four (4) new coal conveyors that transport coal to and from the new additive mixing facility.</i></p>
<b>3.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u> See Monitoring Requirements.</p> <p>B. <u>Control of Particulate Matter Emissions</u> See Monitoring Requirement.</p> <p>C. <u>NSPS:</u>  <b>§60.255 - Performance tests and other compliance requirements.</b>  “(b) An owner or operator of each affected facility that commenced construction, reconstruction, or modification after April 28, 2008, must conduct performance tests according to the requirements of §60.8 and the methods identified in §60.257 to demonstrate compliance with the applicable emissions standards in this subpart as specified in paragraphs (b)(1) and (2) of this section.</p> <p>(2) For each affected facility subject to an opacity standard, an initial performance test must be performed. Thereafter, a new performance test must be conducted according to the requirements in paragraphs (b)(2)(i) through (iii) of this section, as applicable, except as provided for in paragraphs (e) and (f) of this section. Performance test and other</p>

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<b>Table IV – 3</b>	
	<p>compliance requirements for coal truck dump operations are specified in paragraph (h) of this section.</p> <p>(i) If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test must be conducted within 90 operating days of the date that the previous performance test was required to be completed.</p> <p>(ii) If all 6-minute average opacity readings in the most recent performance test are equal to or less than half the applicable opacity limit, a new performance test must be conducted within 12 calendar months of the date that the previous performance test was required to be completed.</p> <p>(iii) An owner or operator of an affected facility continuously monitoring scrubber parameters as specified in §60.256(b)(2) is exempt from the requirements in paragraphs (b)(2)(i) and (ii) if opacity performance tests are conducted concurrently with (or within a 60-minute period of) PM performance tests.”</p> <p>“(c) If any affected coal processing and conveying equipment (e.g., breakers, crushers, screens, conveying systems), coal storage systems, or coal transfer and loading systems that commenced construction, reconstruction, or modification after April 28, 2008, are enclosed in a building, and emissions from the building do not exceed any of the standards in §60.254 that apply to the affected facility, then the facility shall be deemed to be in compliance with such standards.”</p>
<b>3.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>          The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMP) Plan that will be used to prevent particulate matter from becoming airborne.</p> <p>The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the limestone and gypsum handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material.  <b>[Reference: COMAR 26.11.03.06C]</b></p>

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<b>Table IV – 3</b>	
	<p><b>B. <u>Control of Particulate Matter Emissions</u></b>            The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMP) Plan that will be used to prevent particulate matter from becoming airborne.</p> <p>The Permittee shall update Brandon Shores Best Management Practices (BMP) Plan, as required by the initial Part 70 permit for this facility when a revision is needed to ensure that reasonable precautions will be used to prevent particulate matter from this equipment from becoming airborne and that adequate inspection will be conducted and documented. The BMP shall include provisions for routine inspections of emission sources and controls, corrective measures, and recordkeeping for such.</p> <p>The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the limestone and gypsum handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material.  <b>[Reference: COMAR 26.11.03.06C.]</b></p> <p><b>C. <u>NSPS</u></b>            See Record Keeping Requirements.</p>
<b>3.4</b>	<p><b><u>Record Keeping Requirements:</u></b>  <b>Note:</b> All records must be maintained for a period of 5 years. <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p><b>A. <u>Control of Visible Emissions</u></b>            The Permittee shall keep the results of the monthly inspections for a period of five (5) years.</p> <p>The Permittee shall maintain the written reasonable precautions (BMP) at the facility and make it available to the Department upon request.  <b>[Reference: COMAR 26.11.03.06C]</b></p> <p><b>B. <u>Control of Particulate Matter Emissions</u></b>            The Permittee shall keep the results of the monthly inspections for a period of five (5) years.</p>

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<b>Table IV – 3</b>	
	<p>The Permittee shall maintain the written reasonable precautions (BMP) at the facility and make it available to the Department upon request.  <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>C. <u>NSPS</u>  <b>§60.258 - Reporting and Recordkeeping.</b>  “(a) The owner or operator of a coal preparation and processing plant that commenced construction, reconstruction, or modification after April 28, 2008, shall maintain in a logbook (written or electronic) on-site and make it available upon request. The logbook shall record the following:</p> <ol style="list-style-type: none"> <li>(1) The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from manufacturer recommendation, if any, shall be noted.</li> <li>(2) The date and time of periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted.</li> <li>(3) The amount and type of coal processed each calendar month.</li> <li>(4) The amount of chemical stabilizer or water purchased for use in the coal preparation and processing plant.</li> <li>(5) Monthly certification that the dust suppressant systems were operational when any coal was processed, and that manufacturer's recommendations were followed for all control systems. Any variance from the manufacturer's recommendations, if any, shall be noted.</li> <li>(6) Monthly certification that the fugitive coal dust emissions control plan was implemented as described. Any variance from the plan, if any, shall be noted. A copy of the applicable fugitive coal dust emissions control plan and any letters from the Administrator providing approval of any alternative control measures shall be maintained with the logbook. Any actions, e.g., objections, to the plan and any actions relative to the alternative control measures, e.g., approvals, shall be noted in the logbook as well.</li> </ol>
<b>3.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>  The Permittee shall report the results of the inspections and/or testing and provide a copy of the current BMP plan upon request by the Department.  <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>B. <u>Control of Particulate Matter Emissions</u></p>

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<b>Table IV – 3</b>	
	<p>The Permittee shall report the results of the inspections and/or testing and provide a copy of the current BMP plan upon request by the Department. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>C. <u>NSPS</u>  <b>§60.258 - Reporting and recordkeeping</b>  “(b) For the purpose of reports required under section 60.7(c), any owner operator subject to the provisions of this subpart also shall report semiannually periods of excess emissions as follow:  (3) All 6-minute average opacities that exceed the applicable standard.”  “(d) After July 1, 2011, within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with this subpart, the owner or operator of the affected facility must submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE data base available at <a href="http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main">http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main</a>. For performance tests that cannot be entered into WebFIRE (<i>i.e.</i>, Method 9 of appendix A-4 of this part opacity performance tests) the owner or operator of the affected facility must mail a summary copy to United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; mail code: D243-01; RTP, NC 27711.”</p>

**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

<b>Table IV – 4</b>	
<b>4.0</b>	<p><b><u>Emissions Unit Number(s): FSC-BS-LSH and FSC-BS-GH</u></b></p> <p><b>FSC-BS-LSH:</b> The Brandon Shores limestone handling system consists of various equipment and processes to handle limestone. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment. <b>[MDE Reg. No. 6-1149]</b></p> <p><b>FSC-BS-GH:</b> The Brandon Shores gypsum handling system consists of various equipment and processes to handle gypsum. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment. <b>[MDE Reg. No. 6-1150]</b></p>

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<b>4.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p><u>Control of Particulate Matter Emissions</u></p> <p><b>1. COMAR 26.11.06.03C - <u>Particulate Matter from Unconfined Sources.</u></b>          (1) A person may not cause or permit emissions from an unconfined source without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, when appropriate as determined by the Department, the installation and use of hoods, fans, and dust collectors to enclose, capture, and vent emissions. In making this determination, the Department shall consider technological feasibility, practicality, economic impact, and the environmental consequences of the decision.</p> <p><b>2. COMAR 26.11.06.03D - <u>Particulate Matter from Materials Handling and Construction.</u></b>          A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.</p> <p><b>For FSC-BS-LSH only</b></p> <p><b>3. 40 CFR Part 60, Subpart OOO—<u>Standards of Performance for Nonmetallic Mineral Processing Plants</u></b>  <b>§60.672 - <u>Standard for particulate matter (PM).</u></b>          “(b) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.”</p> <p><b>Table 3 to Subpart OOO of Part 60—Fugitive Emission Limits</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"> <p>The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading</p> </td> <td style="width: 25%; text-align: center;"> <p>The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used</p> </td> <td style="width: 25%; text-align: center;"> <p>The owner or operator must demonstrate compliance with these limits by conducting</p> </td> </tr> <tr> <td style="text-align: center;">For</td> <td></td> <td></td> <td></td> </tr> </table>				<p>The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading</p>	<p>The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used</p>	<p>The owner or operator must demonstrate compliance with these limits by conducting</p>	For			
	<p>The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading</p>	<p>The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used</p>	<p>The owner or operator must demonstrate compliance with these limits by conducting</p>								
For											

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	<b>stations or from any other affected facility (as defined in §§60.670 and 60.671)</b>		
Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008	10 percent opacity	15 percent opacity	An initial performance test according to §60.11 of this part and §60.675 of this subpart.

“(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a) and (b) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

- (1) Fugitive emissions from the building openings (except for vents as defined in §60.671) must not exceed 7 percent opacity; and
- (2) Vents (as defined in §60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of this subpart.”

**Table 2 to Subpart 000 of Part 60—Stack Emission Limits for Affected Facilities with Capture Systems**

<b>For</b>	<b>The owner or operator must meet a PM limit of</b>	<b>And the owner or operator must meet an opacity limit of</b>	<b>The owner or operator must demonstrate compliance with these limits by conducting</b>
Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008	0.05 g/dscm (0.022 gr/dscf) <sup>a</sup>	7 percent for dry control devices <sup>b</sup>	An initial performance test according to §60.8 of this part and §60.675 of this subpart; 676(c), (d), and (e).

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<b>4.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p><u>Control of Particulate Matter Emissions</u>            See Monitoring Requirement.</p> <p><b>For FSC-BS-LSH only</b></p> <p><b>3. NSPS:</b>  <b>§60.675 - <u>Test methods and procedures.</u></b>            “(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendices A-1 through A-7 of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.”</p>
<b>4.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p><u>Control of Particulate Matter Emissions</u>            The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMP) Plan that will be used to prevent particulate matter from becoming airborne.</p> <p>The Permittee shall update Brandon Shores Best Management Practices (BMP) Plan, as required by the initial Part 70 permit for this facility when a revision is needed to ensure that reasonable precautions will be used to prevent particulate matter from this equipment from becoming airborne and that adequate inspection will be conducted and documented. The BMP shall include provisions for routine inspections of emission sources and controls, corrective measures, and recordkeeping for such.</p> <p>The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the limestone and gypsum handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material. <b>[Reference: COMAR 26.11.03.06C.]</b></p> <p><b>For FSC-BS-LSH only</b></p>



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	<p><b>3. NSPS</b>  <b>§60.674 - Monitoring of operations.</b>  “(b) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b).  (1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:  (i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and §60.676(b), and  (ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under §60.11 of this part and §60.675 of this subpart.  (2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under §60.676(b) must specify the control mechanism being used instead of the water sprays.”</p>
<p><b>4.4</b></p>	<p><b><u>Record Keeping Requirements:</u></b>  <b>Note:</b> All records must be maintained for a period of at least 5 years.  <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p><u>Control of Particulate Matter Emissions</u>  The Permittee shall keep the results of the monthly inspections for a period of five (5) years.</p>

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<b>Table IV – 4</b>	
	<p>The Permittee shall maintain the written reasonable precautions (BMP) at the facility and make it available to the Department upon request.  <b>[Reference: COMAR 26.11.03.06C]</b></p> <p><b>For FSC-BS-LSH only</b>  <b>3. NSPS</b>  <b>§60.676 - Reporting and recordkeeping.</b>  “(b)(1) Owners or operators of affected facilities (as defined in §§60.670 and 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under §60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.”</p>
<b>4.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><u>Control of Particulate Matter Emissions</u>  The Permittee shall report the results of the inspections and/or testing and provide a copy of the current BMP plan upon request by the Department.  <b>[Reference: COMAR 26.11.03.06C]</b></p> <p><b>For FSC-BS-LSH only</b>  <b>3. NSPS</b>  <b>§60.674 - Reporting and recordkeeping</b>  “(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A-4) to demonstrate compliance with §60.672(b), (e) and (f).”</p> <p>Unless otherwise instructed by MDE, all notifications and reports required by applicable subparts of 40 CFR 60 shall be submitted to:</p> <p style="padding-left: 40px;">Administrator, Compliance Program  Air and Radiation Administration  1800 Washington Boulevard  Baltimore, MD 21230</p> <p style="padding-left: 40px;">and</p>

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	United States Environmental Protection Agency Region III, Enforcement & Compliance Assurance Division Air, RCRA and Toxics Branch (3ED21) Four Penn Center 1600 John F. Kennedy Boulevard Philadelphia, PA 19103-2852

**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

<b>Table IV – 5</b>	
<b>5.0</b>	<p><b><u>Emissions Unit Number(s): FSC-BS-QP</u></b></p> <p><b>FSC-BS-QP:</b> The Quench Pumps are two (2) 500 HP diesel-fired internal combustion engines that are used to supply water to the flue gas desulfurization (FGD) system in case of emergencies. <b>[MDE Reg. No. 9-0988]</b></p>
<b>5.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p>A. <u>Control of Visible Emissions</u></p> <p><b>1. COMAR 26.11.09.05E(2), Emission During Idle Mode.</b> “A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.” This requirement is not applicable during Preventative Maintenance.</p> <p><b>COMAR 26.11.09.05E(3), Emission During Operating Mode.</b> “A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.” This requirement is not applicable during Preventative Maintenance.</p> <p><b><u>Exceptions. COMAR 26.11.09.05E(4)</u></b></p> <p>“(a) Section E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 minutes for the purpose of clearing exhaust system.</p> <p>(b) Section E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:</p> <p>(i) Engines that are idled continuously when not in service: 30 minutes;</p> <p>(ii) All other engines: 15 minutes.</p> <p>(c) Section E(2) and E(3) does not apply while maintenance, repair, or testing is being performed by qualified mechanics.”</p>

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**2. 40 CFR Part 60 Subpart IIII - Standards of Performance (NSPS) for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE).**

**§89.113 - Smoke emission standard.**

(a) Exhaust opacity from compression- ignition non-road engines for which this subpart is applicable must not exceed:

- (1) 20 percent during the acceleration mode;
- (2) 15 percent during the lugging mode; and
- (3) 50 percent during the peaks in either the acceleration or lugging modes.

**B. Control of Particulate Matter Emissions**

NSPS Subpart IIII

**§60.4205b - What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?**

“(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new non-road CI engines in **§60.4202**, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.”.

**C. Control of Sulfur Oxides Emissions**

**COMAR 26.11.09.07A(2) – Control of Sulfur Oxides from fuel burning equipment.** “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV:

- (a) All solid fuels, 1.0 percent;
- (b) **Distillate fuel oils, 0.3 percent;**
- (c) Residual fuel oils, 1.0 percent. “

**§60.4207 - What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?**

“(a) Beginning October 1, 2007, owners, and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners, and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for non-road diesel fuel.”

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**D. Control of Nitrogen Oxides Emissions**

**COMAR 26.11.09.08G – Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 percent or less and Combustion Turbines with a Capacity Factor Greater than 15 percent.**

- (1) “A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:
- (a) Provide certification of the capacity factor of the equipment to the Department in writing;
  - (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
  - (c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;
  - (d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
  - (e) Maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request.”

**NSPS Subpart IIII**

**§60.4205b - What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?**

“(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new non-road CI engines in **§60.4202**, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.”.

**E. Control of VOC Emissions**

“To meet LAER for the two nominal 500-horsepower diesel-fired quench pumps, the Permittee shall install units designed so the emissions of volatile organic compounds (VOCs) from each of the two units shall not exceed the Tier III limits (2008) standards in g/hp-hr.” **[Reference: CPCN 9075 Section VI condition 20]**

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	<p><b>F. <u>Control of Carbon Monoxide Emissions</u></b></p> <p><b>1 BACT Requirement</b>          “To meet the BACT for CO from the two nominal 500-horsepower diesel-fired quench pumps, the Permittee shall install engines designed so that emissions of carbon monoxide (CO) from each of the two units shall not exceed the Tier III limits (2008) standards in grams per horsepower-hour (G-hp-hr.)” <b>[Reference: CPCN 9075 Section V condition 17c]</b></p> <p><b>2 NSPS Subpart IIII</b>  <b>§60.4205b <u>What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?</u></b>          “(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new non-road CI engines in <b>§60.4202</b>, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.”.</p> <p><b>G. <u>Control of Hazardous Air Pollutants (HAPS) Emissions</u></b>  <b>40CFR 63 Subpart ZZZZ—<u>National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines</u></b>  <b>“§63.6590 - <u>What parts of my plant does this subpart cover?</u></b>          This subpart applies to each affected source.          (c) <b><u>Stationary RICE subject to Regulations under 40 CFR Part 60.</u></b>          An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of <b>40 CFR part 60 subpart IIII</b>, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. <i>No further requirements apply for such engines under this part.</i>          (6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.”</p> <p><b>H. NSPS subpart IIII Operational limitations</b>  <b>§60.4209(a) - <u>What are the monitoring requirements if I am an owner or operator of a stationary combustion engine?</u></b>          “(a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.”</p>
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<b>Table IV – 5</b>	
	<p><b>§60.4206</b> - <u>How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?</u>            “Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and <b>60.4205</b> according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.”</p> <p><b>§60.4211(a) and (e)</b> - <u>What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?</u>            “(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.”            “(e) Owners or operators may operate the stationary CI ICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing shall be limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local government standards require maintenance and testing of emergency ICE beyond 100 hours per year. Any operation other than emergency operation, and maintenance and testing, is prohibited.</p>
<b>5.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>            1. &amp; 2. See Monitoring Requirements.</p> <p>B. <u>Control of Particulate Matter Emissions</u>  <b>NSPS: 40 CFR 60 – Subpart III</b>            See Monitoring Requirements.</p>

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<b>Table IV – 5</b>	
	<p>C. <u>Control of Sulfur Oxides Emissions</u>            1. &amp; 2. See Monitoring Requirements</p> <p>D. <u>Control of Nitrogen Oxides Emissions</u>            1 NO<sub>x</sub> RACT            The Permittee shall perform a combustion analysis and optimize combustion at least once annually when the hours of operation exceed 500 during the year.  <b>[Reference: COMAR 26.11.09.08G(1)(b)]</b></p> <p>2 <b>NSPS</b>            See Monitoring Requirements.</p> <p>E. <u>Control of VOC Emissions</u>            Comply with Tier III requirements.</p> <p>F. <u>Control of Carbon Monoxide Emissions</u>            Comply with Tier III requirements</p> <p>G. <u>Control of Hazardous Air Pollutants (HAPS) Emissions</u>            Comply with NSPS Subpart IIII requirements  <b>[Reference: §63.6590(c)]</b></p> <p>H. <u>NSPS subpart IIII Operational limitations</u>            See Record Keeping Requirements.</p>
<b>5.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>            1 The Permittee shall properly operate and maintain the engines in a manner to minimize visible emissions. <b>[Reference: COMAR 26.11.03.06C]</b>            2- The Permittee must operate and maintain the stationary CI internal combustion engine according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. <b>[Reference: §60.4211(a)]</b></p> <p>B. <u>Control of Particulate Matter Emissions</u>  <b>NSPS: 40 CFR 60 – Subpart IIII</b>            See operational limitations in Section 5.4H</p> <p>C. <u>Control of Sulfur Oxides Emissions</u>            1 SO<sub>2</sub> RACT</p>



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<b>Table IV – 5</b>	
	<p>The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil is in compliance with the limitation on the sulfur content of the fuel oil or obtain sulfur in fuel analyses of oil that is representative of the oil burned. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>2. <b>NSPS:</b> 40 CFR 60 – Subpart IIII          Comply with Tier III requirements.</p> <p>D. <u>Control of Nitrogen Oxides Emissions</u>          1 NO<sub>x</sub> RACT          The Permittee shall calculate the capacity factor of the engines for each calendar year within 30 days after the end of each year.  <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>2 <b>NSPS</b>          The Permittee must operate and maintain the stationary CI internal combustion engine according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. <b>[Reference: §60.4211(a)]</b></p> <p>E. <u>Control of VOC Emissions</u>          Comply with Tier III requirements</p> <p>F. <u>Control of Carbon Monoxide Emissions</u>          Comply with Tier III requirements</p> <p>G. <u>Control of Hazardous Air Pollutants (HAPS) Emissions</u>          Comply with NSPS Subpart IIII requirements  <b>[Reference: §63.6590(c)]</b></p> <p>H. <u>NSPS subpart IIII Operational limitations</u>          See Record Keeping Requirements.</p>
<b>5.4</b>	<p><b><u>Record Keeping Requirements:</u></b>  <b>Note:</b> All records must be maintained for a period of at least 5 years.  <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p>A. <u>Control of Visible Emissions</u>          1. The Permittee shall retain records of preventative maintenance that relate to combustion performance on site for at least 5 years and make these records available to the Department upon request.  <b>[Reference: COMAR 26.11.03.06C]</b></p>

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	<p>2. <b>NSPS:</b> 40 CFR 60 – Subpart III          Comply with Tier III requirements.</p> <p>B. <u>Control of Particulate Matter Emissions</u>  <b>NSPS: 40 CFR 60 – Subpart III</b>          See operational limitations in Section 5.4H</p> <p>C. <u>Control of Sulfur Oxides Emissions</u>          1. SO<sub>2</sub> RACT          The Permittee shall maintain records of fuel supplier’s certification or sulfur in fuel analyses and shall make records available to the Department upon request.  <b>[Reference: COMAR 26.11.09.07C]</b></p> <p>2. <b>NSPS:</b> 40 CFR 60 – Subpart III          Comply with Tier III requirements.</p> <p>D. <u>Control of Nitrogen Oxides Emissions</u>          1. NO<sub>x</sub> RACT          The Permittee shall maintain:          (1) Records of the calculated capacity factors. <b>[Reference: COMAR 26.11.03.06C]</b>          (2) Records of hour of operation. <b>[Reference: COMAR 26.11.02.19.C(1)(b)]</b>          (3) Records of combustion analysis performed if the hours of operation exceed 500. <b>[Reference: COMAR 26.11.09.08G(1)(c)]</b>          (4) Record of training program attendance for each operator.  <b>[Reference: COMAR 26.11.09.08G(1)(e)]</b></p> <p>2. <b>NSPS 40 CFR 60 – Subpart III</b>          Comply with Tier III requirements.</p> <p>E. <u>Control of VOC Emissions</u>          Comply with Tier III requirements</p> <p>F. <u>Control of Carbon Monoxide Emissions</u>          Comply with Tier III requirements</p> <p>G. <u>Control of Hazardous Air Pollutants (HAPS) Emissions</u>          Comply with NSPS Subpart III requirements  <b>[Reference: §63.6590(c)]</b></p>
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	<p>H. <u>NSPS subpart IIII Operational limitations</u></p> <p>(1) The Permittee shall maintain a log for the emergency generator indicating the amounts of fuel oil combusted or the hours of operation, and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.).</p> <p>(2) The Permittee shall maintain on site for the life of the source the following records for the emergency diesel generator(s):</p> <p>(a) Documentation of the manufacture date of the diesel engine, if manufactured prior to April 1, 2006, and the manufacturer model year of the diesel engine;</p> <p>(b) The installation date of each emergency diesel generator; and</p> <p>(c) The certifications of compliance or manufacturer engine test data required by 40 CFR §60.4211 and §60.4214(b)</p> <p>(3) Beginning October 1, 2007, for any NSPS emergency diesel generator the Permittee shall for each fuel delivery obtain from the fuel supplier a fuel supplier certification consisting of the name of the oil supplier, the date of delivery, the amount of fuel delivered, and a statement from the fuel supplier that the diesel fuel oil complies with the specifications of 40 CFR §80.510. The Permittee shall maintain the required records on site for at least five (5) years.  <b>[Reference: COMAR 26.11.03.06C]</b></p>
<b>5.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>          1. &amp; 2: The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, “Report of Excess Emissions and Deviations.” <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>B. <u>Control of Particulate Matter Emissions</u>  <b>NSPS: 40 CFR 60 – Subpart IIII</b>          See operational limitations in Section 5.4H.</p> <p>C. <u>Control of Sulfur Oxides Emissions</u>          1 SO<sub>2</sub> RACT          The Permittee shall report fuel supplier certification or a copy of the sulfur in fuel analyses to the Department upon request.  <b>[Reference: COMAR 26.11.09.07C]</b></p> <p>2. NSPS: 40 CFR 60 – Subpart IIII          Comply with Tier III requirements.</p>

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<b>Table IV – 5</b>	
	<p><b>D. <u>Control of Nitrogen Oxides Emissions</u></b>            1. <b>NO<sub>x</sub> RACT</b>            The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report.  <b>[Reference: COMAR 26.11.09.08G(1)(a) &amp; COMAR 26.11.03.06C]</b></p> <p>The Permittee shall submit a record of training program attendance for each operator to the Department upon request.  <b>[Reference: COMAR 26.11.09.08G(1)(e)]</b></p> <p><b>E. <u>Control of VOC Emissions</u></b>            Comply with Tier III requirements</p> <p><b>F. <u>Control of Carbon Monoxide Emissions</u></b>            Comply with Tier III requirements</p> <p><b>G. <u>Control of Hazardous Air Pollutants (HAPS) Emissions</u></b>            Comply with NSPS Subpart IIII requirements  <b>[Reference: §63.6590(c)]</b></p> <p><b>H. <u>NSPS subpart IIII Operational limitations</u></b>            The Permittee shall report the amounts of fuel oil combusted or the hours of operation, and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.) to the Department in the annual emission certification report due on April 1 of each year. <b>[Reference: COMAR 26.11.03.06C]</b></p>

**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

<b>Table IV – 6</b>	
<b>6.0</b>	<p><b><u>Emissions Unit Number(s): FSC-BS-EG</u></b></p> <p><b>FSC-BS-EG:</b> The emergency generator is a 670 HP diesel-fired internal combustion engine installed at the facility to provide back-up power.</p>
<b>6.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p>

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	<p><b>A. <u>Control of Visible Emissions</u></b>  <b>COMAR 26.11.09.05E(2) - <u>Emission During Idle Mode.</u></b> “A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.” This requirement is not applicable during Preventative Maintenance.  <b>COMAR 26.11.09.05E(3) - <u>Emission During Operating Mode.</u></b> “A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.” This requirement is not applicable during Preventative Maintenance.  <u>Exceptions. COMAR 26.11.09.05E(4)</u>  “(a) Section E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 minutes for the purpose of clearing exhaust system.  (b) Section E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:  (i) Engines that are idled continuously when not in service: 30 minutes;  (ii) All other engines: 15 minutes.  (c) Section E(2) and E(3) does not apply while maintenance, repair, or testing is being performed by qualified mechanics.”</p> <p><b>B. <u>Control of Sulfur Oxides Emissions</u></b>  <b>COMAR 26.11.09.07A(2) – <u>Control of Sulfur Oxides from fuel burning equipment.</u></b> “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV: (b) <b>Distillate fuel oils, 0.3 percent.</b>”</p> <p><b>C. <u>Control of Nitrogen Oxides Emissions</u></b>  <b>COMAR 26.11.09.08G – <u>Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 percent or less and Combustion Turbines with a Capacity Factor Greater than 15 percent.</u></b>  (1) “A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:  (a) Provide certification of the capacity factor of the equipment to the Department in writing;  (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;  (c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;</p>
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(d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and  
 (e) Maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request.”

**D. Control of Hazardous Air Pollutants (HAPS) Emissions  
 40CFR 63 Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines  
 §63.6585 - Am I subject to this subpart?**

“You are subject to this subpart if you own or operate a stationary RICE at a **major** or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.”

**§63.6590 - What parts of my plant does this subpart cover?**

“This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.”

**§63.6640 - How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?**

“(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described

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	<p>in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.</p> <p>(1) There is no time limit on the use of emergency stationary RICE in emergency situations.</p> <p>(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).</p> <p>(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.</p> <p>(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.</p> <p>(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.”</p>
<b>6.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>          See Monitoring Requirements.</p>

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<b>Table IV – 6</b>	
	<p><b>B. <u>Control of Sulfur Oxides Emissions</u></b> See Monitoring Requirements</p> <p><b>C. <u>Control of Nitrogen Oxides Emissions</u></b> The Permittee shall perform a combustion analysis and optimize combustion at least once annually when the hours of operation exceed 500 during the year. <b>[Reference: COMAR 26.11.09.08G(1)(b)]</b></p> <p><b>D. <u>Control of Hazardous Air Pollutants (HAPs) Emissions</u></b> See Monitoring Requirements.</p>
<b>6.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p><b>A. <u>Control of Visible Emissions</u></b> The Permittee shall properly operate and maintain the engines in a manner to minimize visible emissions. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p><b>B. <u>Control of Sulfur Oxides Emissions</u></b> The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil is in compliance with the limitation on the sulfur content of the fuel oil or obtain sulfur in fuel analyses of oil that is representative of the oil burned. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p><b>C. <u>Control of Nitrogen Oxides Emissions</u></b> The Permittee shall calculate the capacity factor of the engines for each calendar year within 30 days after the end of each year. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p><b>D. <u>Control of Hazardous Air Pollutants (HAPs) Emissions</u></b> The Permittee must install a non-resettable hour meter on the emergency generator if one is not already installed. <b>[Reference: §63.6625(f)]</b></p>
<b>6.4</b>	<p><b><u>Record Keeping Requirements:</u></b></p> <p><b>Note:</b> All records must be maintained for a period of at least 5 years. <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p><b>A. <u>Control of Visible Emissions</u></b> The Permittee shall retain records of preventative maintenance that relate to combustion performance on site for at least 5 years and make these records available to the Department upon request. <b>[Reference: COMAR 26.11.03.06C]</b></p>



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<b>Table IV – 6</b>	
	<p><b>B. <u>Control of Sulfur Oxides Emissions</u></b>            The Permittee shall maintain records of fuel supplier’s certification or sulfur in fuel analyses and shall make records available to the Department upon request. <b>[Reference: COMAR 26.11.09.07C]</b></p> <p><b>C. <u>Control of Nitrogen Oxides Emissions</u></b>            The Permittee shall maintain:</p> <ol style="list-style-type: none"> <li>(1) Records of the calculated capacity factors. <b>[Reference: COMAR 26.11.03.06C]</b></li> <li>(2) Records of hour of operation. <b>[Reference: COMAR 26.11.02.19.C(1)(b)]</b></li> <li>(3) Records of combustion analysis performed if the hours of operation exceed 500. <b>[Reference: COMAR 26.11.09.08G(1)(c)]</b></li> <li>(4) Record of training program attendance for each operator. <b>[Reference: COMAR 26.11.09.08G(1)(e)]</b></li> </ol> <p><b>D. <u>Control of Hazardous Air Pollutants (HAPs) Emissions</u></b>            The Permittee shall maintain for the emergency generator a log of the hours of operation (including dates and times) and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.) which are recorded by a non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation and how many hours are spent on non-emergency operation. <b>[Reference: COMAR 26.11.03.06C]</b></p>
<b>6.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><b>A. <u>Control of Visible Emissions</u></b>            The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, “Report of Excess Emissions and Deviations.” <b>[Reference: COMAR 26.11.03.06C]</b></p> <p><b>B. <u>Control of Sulfur Oxides Emissions</u></b>            The Permittee shall report fuel supplier certification or a copy of the sulfur in fuel analyses to the Department upon request. <b>[Reference: COMAR 26.11.09.07C]</b></p> <p><b>C. <u>Control of Nitrogen Oxides Emissions</u></b>            The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission</p>

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	<p>certification report. <b>[Reference: COMAR 26.11.09.08G(1)(a) &amp; COMAR 26.11.03.06C]</b></p> <p>The Permittee shall submit a record of training program attendance for each operator to the Department upon request. <b>[Reference: COMAR 26.11.09.08G(1)(e)]</b></p> <p><b>D. <u>Control of Hazardous Air Pollutants (HAPs) Emissions</u></b></p> <p>The Permittee shall report the hours of operation, and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.) to the Department in the annual emission certification report due on April 1 of each year. <b>[Reference: COMAR 26.11.03.06C]</b></p>

**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

<b>Table IV – 7</b>	
<b>7.0</b>	<p><b><u>Emissions Unit Number(s): FSC-HAW-Unit 1 and FSC-HAW-Unit 4</u></b></p> <p><b>FSC-HAW-Unit1:</b> H.A. Wagner Unit 1 is a residual oil or natural gas fired unit (nominally rated at 133 MW). <b>[MDE Reg. No. 5-0469]</b></p> <p><b>FSC-HAW-Unit4:</b> H.A. Wagner Unit 4 is a residual oil-fired unit with natural gas fired used for start-up (nominally rated at 415 MW). <b>[MDE Reg. No. 4-0017]</b></p>
<b>7.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p><b>A. <u>Control of Visible Emissions</u></b>  <b>COMAR 26.11.09.05 - <u>Visible Emissions.</u></b>  <b>“A. <u>Fuel Burning Equipment.</u></b>  <b>(2) Areas III and IV.</b> In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.  <b>(3) <u>Exceptions.</u></b> Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:  <b>(a) The visible emissions are not greater than 40 percent opacity; and</b></p>

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(b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.”

**B. Control of Particulate Matter Emissions**

**COMAR 26.11.09.06B(3) – Solid Fuel Burning Equipment.** “A person may not cause or permit particulate matter caused by the combustion of solid fuel to be discharged into the atmosphere in excess of the amounts shown in Table 1.” ***For these units, the maximum allowable emissions of particulate matter 0.020 gr/scfd @ 50% excess air.***

**COMAR 26.11.09.06C. Determination of Compliance (by stack test).**

“Compliance with the particulate matter emissions standards in this regulation shall be calculated as the average of 3 test runs using EPA Test Method 5 or other United States Environmental Protection Agency test method approved by the Department.”

**C. Control of Sulfur Oxides**

**1. COMAR 26.11.09.07: Control of Sulfur Oxides from Fuel Burning Equipment.**

“A. Sulfur Content Limitations for Fuel. A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:

(2) In Areas III and IV: (c) **Residual fuel oils, 1.0 percent.**”

**2. Acid Rain Provisions**

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

**3. Cross-State Air Pollution Rule**

**See Table IV-14: CSAPR for requirements**

**D. Control of Nitrogen Oxides**

**1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT**

**2. Acid Rain Provisions**

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

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	<p><b>3. Cross-State Air Pollution Rule</b>  <b>See Table IV-14: CSAPR for requirements</b></p> <p>E. <u>Control HAP Emissions.</u>  <b>See Table IV-13: MACT Subpart UUUUU Requirements.</b></p>
<b>7.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>  See Monitoring Requirements.</p> <p>B. <u>Control of Particulate Matter Emissions</u>  The Permittee, in accordance with COMAR 26.11.01.04A(1), shall conduct <u>biennial</u> testing using EPA Reference Methods of 40 CFR Part 60, Appendix A. The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date.  <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>C. <u>Control of Sulfur Oxides</u>  <b>1.</b> The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix D - Emissions Data Protocol for Gas-Fired and Oil-Fired Units. <b>[Reference: COMAR 26.11.03.06C].</b></p> <p><b>2. Acid Rain Provisions</b>  The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. <b>[Reference: 40 CFR Part 75, Appendix A &amp; COMAR 26.11.03.06C].</b></p> <p>D. <u>Control of Nitrogen Oxides</u>  <b>1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT</b></p> <p><b>2. Acid Rain Provisions</b>  The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. <b>[Reference: 40 CFR Part 75, Appendix A &amp; COMAR 26.11.03.06C].</b></p>
<b>7.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u></p>

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	<p>The Permittee shall continuously monitor opacity of the stack gases using a continuous opacity monitor that is certified in accordance with 40 CFR Part 60, Appendix B and that meets the quality assurance criteria of COMAR 26.11.31.06. <b>[Reference: COMAR 26.11.01.10]</b></p> <p><b>B. <u>Control of Particulate Matter Emissions</u></b>          The Permittee shall comply with the CAM requirements found in Table IV-7a &amp; 7b. <b>[Reference: COMAR 26.11.06.03C]</b></p> <p><b>C. <u>Control of Sulfur Oxides</u></b>  <b>1.</b> The Permittee shall comply with the fuel analyses requirements as found in 40 CFR Part 75 Appendix D. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p><b>2. Acid Rain Provisions</b>          The Permittee shall install, certify, operate, and maintain a SO<sub>2</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B- Monitoring Provisions. <b>[Reference: §75.10(a)(1) and Acid Rain Permit].</b></p> <p><b>D. <u>Control of Nitrogen Oxides</u></b>  <b>1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT</b></p> <p><b>2. Acid Rain Provisions</b>          The Permittee shall install, certify, operate, and maintain a NO<sub>x</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B- Monitoring Provisions. <b>[Reference: §75.10(a)(1) and Acid Rain Permit].</b></p>
<b>7.4</b>	<p><b><u>Record Keeping Requirements:</u></b>  <b>Note:</b> All records must be maintained for a period of at least 5 years. <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p><b>A. <u>Control of Visible Emissions</u></b>          All information required by this regulation to be maintained or reported to the Department shall be retained and made available for review by the Department for a minimum of 5 years from the time the report is submitted. <b>[Reference: COMAR 26.11.01.10E]</b></p> <p><b>B. <u>Control of Particulate Matter Emissions</u></b>          The Permittee shall maintain records of the results of all particulate emission compliance tests. <b>[Reference: COMAR 26.11.01.05A(2)]</b></p> <p><b>C. <u>Control of Sulfur Oxides</u></b></p>

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<b>Table IV – 7</b>	
	<p>1. The Permittee shall retain, on site for at least 5 years, fuel oil analyses of samples collected in accordance with 40 CFR Part 75 Appendix D. <b>[Reference: COMAR 26.11.06.03C]</b></p> <p><b>2. Acid Rain Provisions</b>            The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75. <b>[Reference: See Acid Rain Permit]</b></p> <p><u>D. Control of Nitrogen Oxides</u>  <b>1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT.</b></p> <p><b>2. Acid Rain Provisions</b>            The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75. <b>[Reference: See Acid Rain Permit]</b></p>
<b>7.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>  <b>COMAR 26.11.01.10D. - Record Keeping and Reporting Requirements.</b>  <b>“(1) System Downtime Reporting Requirements.</b>            (a) All COM downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the first day on which downtime occurs.            (b) The COM downtime report shall include the reason, if known, for the breakdown and the estimated period of time that the COM will be down. The owner or operator shall notify the Department by telephone when the COM has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in 40 CFR Part 51 Appendix P, and is producing data.            (c) Except as otherwise approved by the Department and the EPA, a COM shall operate in compliance with the requirements of §B(2) of this regulation and collect data for at least 95 percent of the source's operating time during any calendar quarter. The alternative measurement plan required in §B(1)(b) of this regulation shall be used at all times when the COM fails to conform to performance standards required by §B(2) of this regulation during data collection.  <b>(2) Data Reporting Requirements.</b>            (a) A COM shall automatically reduce all data to six-minute block averages calculated from 24 or more equally spaced data points.            (b) All COM data shall be reported in a format approved by the Department.</p>

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	<p>(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:</p> <ul style="list-style-type: none"> <li>(i) The cause, time periods, and the opacity of all emissions which exceed the applicable quarterly, daily, and hourly emission standards as provided in COMAR 26.11.09.05A(4);</li> <li>(ii) The COM and installation downtimes, including the time and date of the beginning and end of each downtime period, and whether the downtime was scheduled;</li> <li>(iii) The cause of all COM downtime;</li> <li>(iv) The total operating time for the quarter, and the total time and percent of the operating time during the quarter that excess emissions occurred, and the percentage of COM downtime, during the calendar quarter;</li> <li>(v) Quarterly quality assurance activities;</li> <li>(vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status;</li> <li>(vii) Other information that the Department determines is necessary to evaluate the data or to ensure that compliance is achieved.”</li> </ul> <p><b>B. Control of Particulate Matter Emissions</b>      The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to test and a notice of intent to test at least 10 days prior to the scheduled test date. The Permittee shall submit the results of stack tests in a final report within 60 days from test completion. <b>[Reference: COMAR 26.11.01.04A: Testing and Monitoring].</b></p> <p><b>C. Control of Sulfur Oxides</b>  <b>1.</b>-The Permittee shall submit fuel certification reports or fuel oil analyses to the Department upon request. <b>[Reference: COMAR 26.11.06.03C]</b></p> <p><b>2. Acid Rain Provisions</b>      The Permittee shall comply with the reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. <b>[Reference: See the Acid Rain Permit]</b></p> <p><b>D. Control of Nitrogen Oxides</b>  <b>1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT</b></p> <p><b>2. Acid Rain Provisions</b>      The Permittee shall comply with the reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. <b>[Reference: See the Acid Rain Permit]</b></p>
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**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

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**Table IV-7a**

<b>COMPLIANCE ASSURANCE MONITORING REQUIREMENTS – PART 64</b>		
<b>Electrostatic Precipitator for FSC-HAW-Unit1 (Residual Fuel Oil firing only)</b>		
<b>Applicable Requirement</b>	<b>PM:</b> Emission Limit 0.02 gr/scfd @ 50% excess. COMAR 26.11.09.06B(2)	
I. Indicator	Indicator #1 - <b>Opacity</b>	Indicator #2 – <b>ESP Alarm Monitoring</b>
	Continuous Opacity Monitor (COM)	Malfunction of Electrostatic Precipitator (ESP).
Measurement Approach	Opacity data is measured and recorded by a certified opacity monitoring system	Operators oversee the ESP unit operation and will react as appropriate to control system alarms that indicate abnormal operation
II. Indicator Range	An internal, non-enforceable <b>trigger level of 10.2% average opacity</b> is established. The unit operators will take corrective action when the trigger level is exceeded	ESP is normally operated with at least three fields in service. The activation of a control room alarm indicates possible operation of the ESP outside the normal operating conditions.
III. Performance Criteria	The COM meets the performance criteria for installation and operation as specified in COMAR 26.11.01.10, COMAR 26.11.01.11, COMAR 26.11.31, and the more stringent requirements of the Acid Rain monitoring rules of 40 CFR Part 75	Normal operation of the ESP is continuously monitored
1. Data Representativeness	COM data will be collected and validated in accordance with COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.	The alarm points have been set within the distributed control system (DCS) to alert the operators of potential ESP malfunction.
2. Verification of Operational Status (new or modified equipment)	COM data availability requirements are continuous data availability excluding audit and check periods and malfunctions that are corrected within two hours each day. CEM downtime up to 10% of operating time may initiate follow-up by MDE per COMAR 26.11.31.	Continuous monitoring of the DCS will alert the operators of potential ESP malfunction.
3. QA/QC Practices and Criteria	COM QA/QC procedures are consistent with the applicable requirements of COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.	Calibration, maintenance, and operation of the ESP in accordance with good operating practice.



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4. Monitoring Frequency	Opacity is measured on a continuous basis with the exception of periods when the fans are shut off and there is no flame in the boiler Data from the backup monitoring system and ESP power management system will be used to indicate normal ESP performance during QA/QC periods or monitor malfunctions.	Monitoring is ongoing, so that alarm notifications are triggered whenever a potential malfunction occurs.
5. Data Collection Procedures	Opacity data is collected in a certified Data Acquisition System (DAS) and is archived for at least five years.	The ESP operations are continually monitored. Hard copies of event data will be stored for five years.
6. Averaging Period	One-minute average data is collected and stored. Three-hour block averages are calculated and stored based on the minute-by-minute data, for use as a compliance surrogate of Method 5 based in PM mass emission limits.	So long as the ESP is being operated normally, the primary indicator (opacity) will be relied upon to indicate continuous compliance with the PM standard.

**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

<b>Table IV-7b</b>	
<b>COMPLIANCE ASSURANCE MONITORING REQUIREMENTS – PART 64</b>	
<b>Electrostatic Precipitator for FSC-HAW-Unit4 (Residual Fuel Oil firing only)</b>	
<b>Applicable Requirement</b>	<b>PM:</b> Emission Limit 0.02 gr/scfd @ 50% excess. COMAR 26.11.09.06B(2)
I. Indicator	Indicator #1 - <b>Opacity</b> Continuous Opacity Monitor (COM)
Measurement Approach	Opacity data is measured and recorded by a certified opacity monitoring system
II. Indicator Range	An internal, non-enforceable <b>trigger level of 10.6% average opacity</b> is established as the Indicator Range. The unit operators will take corrective action when the trigger level is exceeded
III. Performance Criteria	The COM meets the performance criteria for installation and operation as specified in COMAR 26.11.01.10, COMAR 26.11.01.11, COMAR 26.11.31, and the more stringent requirements of the Acid Rain monitoring rules of 40 CFR Part 75
1. Data Representativeness	COM data will be collected and validated in accordance with COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.
2. Verification of Operational Status (new or modified equipment)	COM data availability requirements are continuous data availability excluding audit and check periods and malfunctions that are corrected within two hours each day. CEM downtime up to 10% of operating time may initiate follow-up by MDE per COMAR 26.11.31.
3. QA/QC Practices and Criteria	COM QA/QC procedures are consistent with the applicable requirements of COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.

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4. Monitoring Frequency	Opacity is measured on a continuous basis with the exceptions of periods when the fans are shut off and there is no flame in the boiler. Data from the backup monitoring system and ESP power management system will be used to indicate normal ESP performance during QA/QC periods or monitor malfunctions.
5. Data Collection Procedures	Opacity data is collected in a certified Data Acquisition System (DAS) and is archived for at least five years.
6. Averaging Period	One-minute average data is collected and stored. Three-hour block averages are calculated and stored based on the minute-by-minute data, for use as a compliance surrogate of Method 5 based in PM mass emission limits.

**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

**Table IV – 8**

<b>8.0</b>	<p><b><u>Emissions Unit Number(s): FSC-HAW-Unit 2</u></b></p> <p><b>FSC-HAW-Unit2:</b> H.A. Wagner Unit 2 is a natural gas fired unit rated at 250 MMBtu/hr. equipped with low NO<sub>x</sub> burners. <b>[MDE Reg. No. 3-0017]</b> (<i>modified in 2020-fuel switch from coal fired to natural gas fired</i>).        The emissions from H.A. Wagner Unit 2 are discharged through a single stack (Emission Point: FSC-HAW-Unit2-EP1).</p>
<b>8.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p>A. <u>Control of Visible Emissions</u>  <b>COMAR 26.11.09.05 - Visible Emissions.</b>  <u>“A. Fuel Burning Equipment.</u>        (2) Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.        (3) <u>Exceptions.</u> Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:        (a) The visible emissions are not greater than 40 percent opacity; and        (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.”</p> <p>B. <u>Control of Nitrogen Oxides</u>  <b>1. NO<sub>x</sub> RACT Requirements</b>  <b>COMAR 26.11.09.08 - Control of NO<sub>x</sub> Emissions for Major Stationary Sources.</b>  <u>“B General Requirements and Conditions</u></p>

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**(4) Emissions Averaging.**

(a) Instead of meeting the source specific emission standards set forth in §§C—F of this regulation, a person who owns or operates more than one installation subject to this regulation may achieve compliance by meeting an overall source or system-wide NO<sub>x</sub> emission reduction that is equivalent to or greater than the NO<sub>x</sub> emission reduction that would be achieved if each individual installation complied with applicable requirements.

(b) A person who proposes to comply with this regulation by averaging the emissions of two or more installations (separate stacks) shall submit a proposal to the Department for approval.

(c) Any proposal for emissions averaging approved by the Department is not an acceptable means of compliance until the proposal is also approved by the EPA as a revision to the State Implementation Plan (SIP).

(d) A person who proposes to average emissions to comply with this regulation shall:

(i) Have the capability to continuously monitor NO<sub>x</sub> emissions for each installation to be included in the emissions averaging; and

(ii) Demonstrate to the Department that on each day of operation the total plant or system-wide NO<sub>x</sub> emissions are equal to or less than the NO<sub>x</sub> emissions that would be discharged if each installation met the applicable emission standard in this regulation.”

**“C. Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 250 Million Btu Per Hour or Greater.**

(1) A person who owns or operates fuel-burning equipment with a rated heat input capacity of 250 Million Btu per hour or greater shall equip each installation with combustion modifications or other technologies to meet the NO<sub>x</sub> emission rates in §C(2) of this regulation.

(2) The maximum NO<sub>x</sub> emission rates as pounds of NO<sub>x</sub> per Million Btu per hour are: (c) 0.30 for oil fired or gas/oil fired units located at an electric generating facility.”

(3) A person who owns or operates fuel burning equipment with a rated heat input capacity of 250 Million Btu per hour or greater shall install, operate, calibrate, and maintain a certified NO<sub>x</sub> CEM or an alternative NO<sub>x</sub> monitoring method approved by the Department and the EPA on each installation.”

**2. Acid Rain Provisions**

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

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<b>Table IV – 8</b>	
	<p><b>3. Cross-State Air Pollution Rule</b>  <b>See Table IV-14: CSAPR for requirements</b></p> <p>C. <u>Control of HAP Emissions</u>  <b>See Table IV-8a: MACT Subpart DDDDD Requirements.</b></p>
<b>8.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>          See Monitoring Requirements.</p> <p>B. <u>Control of Nitrogen Oxides</u>  <b>1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT</b></p> <p><b>2. Acid Rain Provisions</b>          The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. <b>[Reference: 40 CFR Part 75, Appendix A &amp; COMAR 26.11.03.06C].</b></p>
<b>8.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>          The Permittee shall properly operate and maintain the boiler in a manner to prevent visible emissions. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>B. <u>Control of Nitrogen Oxides</u>  <b>1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT</b></p> <p><b>2. Acid Rain Provisions</b>          The Permittee shall install, certify, operate, and maintain a NO<sub>x</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B- Monitoring Provisions. <b>[Reference: §75.10(a)(1) and Acid Rain Permit].</b></p>
<b>8.4</b>	<p><b><u>Record Keeping Requirements:</u></b>  <b>Note:</b> All records must be maintained for a period of at least 5 years. <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p>A. <u>Control of Visible Emissions</u>          The Permittee shall keep records of the maintenance performed on the boiler. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>B. <u>Control of Nitrogen Oxides</u></p>

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<b>Table IV – 8</b>	
	<p><b>1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT</b></p> <p><b>2. Acid Rain Provisions</b>            The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75. <b>[Reference: See Acid Rain Permit]</b></p>
<b>8.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>            The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, Plant Wide Condition, “Report of Excess Emissions and Deviations” <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>B. <u>Control of Nitrogen Oxides</u></p> <p><b>1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT</b></p> <p><b>2. Acid Rain Provisions</b>            The Permittee shall comply with the reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. <b>[Reference: See the Acid Rain Permit]</b></p>

“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

<b>Table IV – 8a – MACT Subpart DDDDD</b>	
<b>8a.0</b>	<p><b><u>Emissions Unit Number(s): FSC-HAW-Unit 2 Cont'd</u></b></p> <p><b>FSC-HAW-Unit2:</b> H.A. Wagner Unit 2 is a natural gas fired unit rated at 250 MMBtu/hr. equipped with low NO<sub>x</sub> burners. <b>[MDE Reg. No. 3-0017]</b> <i>(modified in 2020-fuel switch from coal fired to natural gas fired)</i>            The emissions from H.A. Wagner Unit 2 are discharged through a single stack (Emission Point: FSC-HAW-Unit2-EP1).</p>
<b>8a.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p><u>Control of HAPs Emissions</u>  <b>40 CFR Part 63, Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters</b>  <b>§63.7485 - Am I subject to this subpart?</b>            You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in</p>

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**Table IV – 8a – MACT Subpart DDDDD**

§63.7575 that is located at, or is part of, a major source of HAP, except as specified in §63.7491. For purposes of this subpart, a major source of HAP is as defined in §63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in §63.7575.

**§63.7495 - When do I have to comply with this subpart?**

“(d) You must meet the notification requirements in §63.7545 according to the schedule in §63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.”

(f) If you own or operate an existing EGU that becomes subject to this subpart after January 31, 2016, you must be in compliance with the applicable existing source provisions of this subpart on the effective date such unit becomes subject to this subpart.”

**§63.7500 - What emission limitations, work practice standards, and operating limits must I meet?**

“(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.”

(3) At all times, you must operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

“(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in §63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.”

**Limited-use boiler or process heater** means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable average annual capacity factor of no more than 10 percent.

**[Reference: §63.7575]**

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<b>Table IV – 8a – MACT Subpart DDDDD</b>	
	<p><u>Operational Limit</u>            In order to meet the definition of a “Limited use boiler” under 40 CFR 63 Subpart DDDDD, the Permittee shall limit the annual capacity factor as defined in §63.7575 for Wagner 2 (<b>FSC-HAW-Unit2</b>) boiler to no more than 10 percent. [Reference: MDE PTC No. 003-0468-3-0017 Condition Part C (4), issued December 19, 2020]</p>
<b>8a.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p><u>Control of HAPs Emissions</u>            The Permittee must complete a tune-up on Wagner 2 boiler (limited use boiler) every <u>five years</u> as specified in §63.7540. <i>Limited use boiler</i> must conduct tune-up as specified in paragraphs (a)(10)(i) through (vi) of §63.7540 to demonstrate continuous compliance. The Permittee shall conduct initial tune-up upon initial start-up of the boiler. [Reference: §63.7515(d)]</p>
<b>8a.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p><u>Control of HAPs Emissions</u>  <b>§63.7530 - <u>How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?</u></b>            “(e) You must include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 to this subpart, and that the assessment is an accurate depiction of your facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.            (f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.7545(e).            (g) If you elect to demonstrate that a gaseous fuel meets the specifications of another gas 1 fuel as defined in §63.7575, you must conduct an initial fuel specification analysis according to §63.7521(f) through (i) and according to the frequency listed in §63.7540(c) and maintain records of the results of the testing as outlined in §63.7555(g). For samples where the initial mercury specification has not been exceeded, you will include a signed certification with the Notification of Compliance Status that the initial fuel specification test meets the gas specification outlined in the definition of other gas 1 fuels.”</p>

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**Continuous Compliance Requirements**

**§63.7540** - How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

“(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 13 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.”

“(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. **This frequency does not apply to limited-use boilers** and

process heaters, as defined in §63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO<sub>x</sub> requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet



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<b>Table IV – 8a – MACT Subpart DDDDD</b>	
	<p>basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and</p> <p>(vi) Maintain on-site and submit, if requested by the Administrator, report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,</p> <p>(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;</p> <p>(B) A description of any corrective actions taken as a part of the tune-up; and</p> <p>(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.”</p> <p>(12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in §63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.</p> <p>(13) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.</p> <p>(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 13 to this subpart that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in this subpart. These deviations must be reported according to the requirements in §63.7550.”</p>
<b>8a.4</b>	<p><b><u>Record Keeping Requirements:</u></b>  <b>Note:</b> All records must be maintained for a period of 5 years. <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p>

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<b>Table IV – 8a – MACT Subpart DDDDD</b>	
	<p><u>Control of HAPs Emissions</u>  <u><b>Notification, Reports, and Records</b></u>  <u><b>§63.7555 - What records must I keep?</b></u>  “(a)(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.”</p> <p><u><b>§63.7560 - In what form and how long must I keep my records?</b></u>  “(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).  <b>(b)</b> As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.  <b>(c)</b> You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years.”</p>
<b>8a.5</b>	<p><u><b>Reporting Requirements:</b></u></p> <p><u>Control of HAPs Emissions</u>  <u><b>Notification, Reports, and Records</b></u>  <u><b>§63.7545 - What notifications must I submit and when?</b></u>  “(a) You must submit to the Administrator all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.  <b>(c)</b> As specified in §63.9(b)(4) and (5), if you startup your new or reconstructed affected source on or after January 31, 2013, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source. For a <b>new</b> or reconstructed affected source that has reclassified to major source status, you must submit an Initial Notification not later 120 days after the source becomes subject to this subpart.  <b>(e)</b> If you are required to conduct an initial compliance demonstration as specified in §63.7530, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following</p>

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	<p>the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8), as applicable. If you are not required to conduct an initial compliance demonstration as specified in §63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) and must be submitted within 60 days of the compliance date specified at §63.7495(b).”</p> <p>“(8) In addition to the information required in §63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official: (i) “This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR part 63 subpart DDDDD at this site according to the procedures in §63.7540(a)(10)(i) through (vi).”</p> <p>“(f) If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to this subpart, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in §63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in §63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section.</p> <p>(1) Company name and address.</p> <p>(2) Identification of the affected unit.</p> <p>(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared, or the natural gas supply interruption began.</p> <p>(4) Type of alternative fuel that you intend to use.”</p> <p>(5) Dates when the alternative fuel use is expected to begin and end.</p> <p>“(h) If you have switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:</p> <p>(1) The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.</p>
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- (2) The currently applicable subcategory under this subpart.  
 (3) The date upon which the fuel switch or physical change occurred.”

**§63.7550 - What reports must I submit and when?**

“(a) You must submit each report in Table 9 to this subpart that applies to you.

You must submit a(n)	The report must contain	You must submit the report
<b>1. Compliance report</b>	<b>a. Information required in §63.7550(c)(1) through (5); and</b>	Semiannually, annually, biennially, or <b>every 5 years according to the requirements in §63.7550(b).</b>

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. **For units that are subject only to a requirement to conduct an annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.**

(1) The first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in §63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in §63.7495.

(2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in §63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual

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	<p>reporting period from July 1 through December 31. <b>Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.</b></p> <p>(4) Each subsequent compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. <b>Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.</b></p> <p>(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.</p> <p>(1) If the facility is subject to the requirements of a tune up, they must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of this section, (xiv) and (xvii) of this section, and paragraph (c) (5)(iv) of this section for limited-use boiler or process heater.</p> <p>“(5)(i) Company and Facility name and address.</p> <p>(ii) Process unit information, emissions limitations, and operating parameter limitations.</p> <p>(iii) Date of report and beginning and ending dates of the reporting period.</p> <p>(iv) The total operating time during the reporting period.”</p> <p>“(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, <b>or 5-year tune-up</b> according to §63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.”</p> <p>“(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.”</p> <p>“(3) You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA’s CDX). You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<a href="http://www.epa.gov/ttn/chief/cedri/index.html">http://www.epa.gov/ttn/chief/cedri/index.html</a>), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.”</p>
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“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

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<b>9.0</b>	<p><b><u>Emissions Unit Number(s): FSC-HAW-Unit3</u></b></p> <p><b>FSC-HAW-Unit3:</b> H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. <b>[MDE Reg. No. 3-0003]</b>  <i>(Permit to construct issued in 2022 for fuel switch from coal fired to blend of residual oil and distillate oils; Modification expected to be completed by Dec 31, 2025).</i></p>
<b>9.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p>A. <u>Control of Visible Emissions</u>  <b>COMAR 26.11.09.05 - Visible Emissions.</b>  <u>“A. Fuel Burning Equipment.</u>          (2) Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.          (3) <u>Exceptions.</u> Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:          (a) The visible emissions are not greater than 40 percent opacity; and          (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.”</p> <p>B. <u>Control of Particulate Matter Emissions</u>  <b>1. COMAR 26.11.09.06B:</b> Areas III and IV. The following apply in Areas III and IV:          (2) <u>Residual Fuel-Oil-Burning Equipment.</u> A person may not cause or permit particulate matter caused by the combustion of residual fuel oil to be discharged into the atmosphere in excess of the amounts shown in Table 1 in Regulation .09 of this chapter.          (3) <u>Solid Fuel Burning Equipment.</u> “A person may not cause or permit particulate matter caused by the combustion of solid fuel to be discharged into the atmosphere in excess of the amounts shown in Table 1.” <b>For</b></p>

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*these units, the maximum allowable emissions of particulate matter 0.03 gr/scfd @ 50% excess air.*

**COMAR 26.11.09.06C. Determination of Compliance (by stack test).**

“Compliance with the particulate matter emissions standards in this regulation shall be calculated as the average of 3 test runs using EPA Test Method 5 or other United States Environmental Protection Agency test method approved by the Department.”

**C. Control of Sulfur Oxides**

**1. COMAR 26.11.09.07: Control of Sulfur Oxides from Fuel Burning Equipment.**

“**A. Sulfur Content Limitations for Fuel.** A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:

(2) In Areas III and IV: (a) **All solid fuels, 1.0 percent, (b) Distillate fuel oils, 0.3 percent.**”

**C. Request for Analyses.** Any person offering to sell or deliver fuel or any person responsible for equipment in which fuel or process gas is burned, upon request, shall submit to the Department or control officer such analyses of fuel or process gas as may be required to determine compliance with this regulation.”

**Fuel Type Limits:** The only permissible fuel for Wagner Unit 3 (**FSC-HAW-Unit3**) is solid fossil fuel including bituminous coal, sub-bituminous coal, and a blend of bituminous and sub-bituminous coals, except that natural gas may be used during startups. [**Reference: COMAR 26.11.02.02H & CPCN No. 9338, conditions B-IV-1**]

*Note: December 6, 2021, approval letter, the PPRP and MDE stated that Condition B-IV-1 of the CPCN Initial Recommended License Conditions for Public Service Commission Case No. 9338 should be revised to include a provision that the sulfur content of the blend of distillate and residual oils in Wagner 3 be limited to a maximum of 0.3% by weight. This corresponds to the limit for distillate oil stated in COMAR 26.11.09.07A(2)(b).*

**2. Healthy Air Act**

**COMAR 26.11.27.03C. SO<sub>2</sub> Emission Limitations.**

(1) Except as provided in §E of this regulation, annual SO<sub>2</sub> emissions from each affected electric generating unit may not exceed the number of tons in §C(2) of this regulation.

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**(2) Annual Tonnage Limitations.**

Affected Unit	Annual SO <sub>2</sub> Tonnage Limitations Beginning
	January 1, 2013
H.A Wagner Unit 3	2,490 tons

**COMAR 26.11.27.03E. System-Wide Compliance Determinations.**

(1) Compliance with the emission limitations in §§B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.

(2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§B and C of this regulation.

(3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.

**3. Acid Rain Provisions**

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

**4. Cross-State Air Pollution Rule**

**See Table IV-14: CSAPR for requirements**

D. Control of Nitrogen Oxides

**1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT**

**2. Healthy Air Act**

**COMAR 26.11.27.03B. NO<sub>x</sub> Emission Limitations.**

“(1) Except as provided in §E of this regulation, annual NO<sub>x</sub> emissions from each affected electric generating unit may not exceed the number of tons in §B(2) of this regulation.

**(2) Annual Tonnage Limitations.**

Affected Unit	Annual NO <sub>x</sub> Tonnage Limitations Beginning
	January 1, 2012
H.A Wagner Unit 3	1,115 tons



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(3) Except as provided in §E of this regulation, ozone season NO<sub>x</sub> emissions from each affected electric generating unit may not exceed the number of tons in §B(4) of this regulation.”

“(6) Ozone Season Tonnage Limitations.

Affected Unit	Ozone Season NO <sub>x</sub> Tonnage Limitations Beginning
	May 1, 2012
H.A Wagner Unit 3	481 tons

(7) Electric System Reliability During Ozone Seasons.

(a) An exceedance of the NO<sub>x</sub> limitations in §B(4) or (6) of this regulation which occurs because PJM Interconnection, LLC or a successor independent system operator, acts to invoke "Maximum Emergency Generation", "Load Reduction", "Voltage Reduction", "Curtailement of Non-essential Building Load", or "Manual Load Dump" procedures in accordance with the current PJM Manual, or a PJM alert preceding such action as to a generating unit that has temporarily shut down in order to avoid potential interruption in electric service and maintain electric system reliability is not a violation of this chapter provided that:

- (i) Within 36 hours following the action, the owner or operator of the affected electric generating unit or units notifies the Manager of the Air Quality Compliance Program of the action taken by PJM Interconnection and provides the Department with documentation of the action which is satisfactory to the Department;
- (ii) Within 48 hours after completion of the action, the owner or operator of the affected unit or units provides the Department with the estimated NO<sub>x</sub> emissions in excess of the emission limitation; and
- (iii) *See State-only enforceable section of the permit for additional requirement.*

(b) The owner or operator of an electric generating unit or system, as applicable, shall send written notice to the Manager of the Air Quality Compliance Program not later than 5 business days following the day when the cumulative ozone season NO<sub>x</sub> emissions of an electric generating unit or system, as applicable, are:

- (i) Equal to approximately 80 percent of the applicable ozone season emission limitation; and
- (ii) Equal to the applicable ozone season emission limitation. “

**COMAR 26.11.27.03E. System-Wide Compliance Determinations.**

“(1) Compliance with the emission limitations in §§B and C of this regulation may be achieved by demonstrating that the total number of

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	<p>tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.</p> <p>(2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§B and C of this regulation.</p> <p>(3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.”</p> <p><b>3. Acid Rain Provisions</b>          The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. <u>Note:</u> A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.</p> <p><b>4. Cross-State Air Pollution Rule</b>  <b>See Table IV-14: CSAPR for requirements</b></p> <p>E. <u>Control of HAP Emissions</u>  <b>See Table IV-13: MACT Subpart UUUUU Requirements.</b></p> <p>F. <u>Operational Limits</u>  <b>See Table IV-9b-Boilers Modification.</b></p>
<b>9.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>          See Monitoring Requirements.</p> <p>B. <u>Control of Particulate Matter Emissions</u>  <b>1.</b> The Permittee, in accordance with COMAR 26.11.01.04A(1), shall conduct annual testing using EPA Reference Methods of 40 CFR Part 60, Appendix A. The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to the proposed test date and provide a 10-day notice to the Department prior to the scheduled test date. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>C. <u>Control of Sulfur Oxides</u>  <b>1.</b> The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established</p>

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	<p>in 40 CFR Part 75, Appendix A. <b>[Reference: 40 CFR Part 75, Appendix A &amp; COMAR 26.11.03.06C].</b></p> <p><b>2. Healthy Air Act</b>          The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. <b>[Reference: 40 CFR Part 75, Appendix A &amp; COMAR 26.11.03.06C].</b></p> <p><b>3. Acid Rain Provisions</b>          The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. <b>[Reference: 40 CFR Part 75, Appendix A &amp; COMAR 26.11.03.06C].</b></p> <p><u>D. Control of Nitrogen Oxides</u>  <b>1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT</b></p> <p><b>2. Healthy Air Act</b>          The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. <b>[Reference: 40 CFR Part 75, Appendix A &amp; COMAR 26.11.03.06C]</b></p> <p><b>3. Acid Rain Provisions</b>          The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. <b>[Reference: 40 CFR Part 75, Appendix A &amp; COMAR 26.11.03.06C].</b></p>
<b>9.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p><u>A. Control of Visible Emissions</u>          The Permittee shall continuously monitor opacity of the stack gases using a continuous opacity monitor that is certified in accordance with 40 CFR Part 60, Appendix B and that meets the quality assurance criteria of COMAR 26.11.31.06. <b>[Reference: COMAR 26.11.01.10]</b></p> <p><u>B. Control of Particulate Matter Emissions</u>          See CAM Requirements in Table IV-9a.</p> <p><u>C. Control of Sulfur Oxides</u></p>

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	<p>1. The Permittee shall obtain fuel supplier in fuel analyses or collect and analyze coal samples of coal received that demonstrate that the coal is in compliance with the 1.0 percent sulfur content in fuel limitation on an as burned basis. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>“The owner or operator of fuel-burning equipment burning coal, with a heat input capacity of 100 million Btu per hour or greater, shall install CEMs to measure and record sulfur dioxide, nitrogen oxide, either oxygen or carbon dioxide, and flow.” <b>[Reference: COMAR 26.11.01.11B(2)]</b></p> <p><b>2. Healthy Air Act</b>  <b>COMAR 26.11.27.05 – <u>Monitoring and Reporting Requirements</u></b>  <b>“A. Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.”</b></p> <p><b>3. Acid Rain Provisions</b>          The Permittee shall install, certify, operate, and maintain a SO<sub>2</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B- Monitoring Provisions. <b>[Reference: §75.10(a)(1) and Acid Rain Permit].</b></p> <p><u>D. Control of Nitrogen Oxides</u></p> <p><b>1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT</b></p> <p><b>2. Healthy Air Act</b>  <b>COMAR 26.11.27.05 – <u>Monitoring and Reporting Requirements</u></b>  <b>“A. Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.”</b></p> <p><b>Continuous Emissions Monitoring Requirements – Requires the Permittee to operate all CEMS under the requirements of COMAR 26.11.01.11. [Reference: COMAR 26.11.01.11]</b></p> <p><b>3. Acid Rain Provisions</b>          The Permittee shall install, certify, operate, and maintain a NO<sub>x</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B- Monitoring Provisions. <b>[Reference: §75.10(a)(1) and Acid Rain Permit].</b></p>
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<b>9.4</b>	<p><b><u>Record Keeping Requirements:</u></b>  <b>Note:</b> All records must be maintained for a period of at least 5 years. <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p><b>A. <u>Control of Visible Emissions</u></b>          All information required by this regulation to be maintained or reported to the Department shall be retained and made available for review by the Department for a minimum of 5 years from the time the report is submitted. <b>[Reference: COMAR 26.11.01.10E]</b></p> <p><b>B. <u>Control of Particulate Matter Emissions</u></b>          The Permittee shall maintain records of the results of all particulate emission compliance tests. For compliance stack test required under Conditions B-IV-6 and B-IV-7 of CPCN No. 9338, Wagner shall maintain all records of stack test notifications, reports, and results for a period of at least 5 years. <b>[Reference: COMAR 26.11.06.03C, COMAR 26.11.02.02H and CPCN No. 9338, Condition B-IV-26 &amp; 32]</b></p> <p><b>C. <u>Control of Sulfur Oxides</u></b>  <b>1.</b> The Permittee shall retain, on site for at least 5 years, fuel supplier certifications stating that the coal is in compliance with the sulfur content in the fuel limitation or analyses of collected samples. <b>[Reference: COMAR 26.11.06.03C]</b></p> <p>The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E. <b>[Reference: COMAR 26.11.01.11E(2)].</b></p> <p><b>2. <u>Healthy Air Act</u></b>          The Permittee shall maintain all records necessary to demonstrate compliance with the requirements of the Healthy Air Act, COMAR 26.11.27.          The Permittee shall maintain all information required to be reported or maintained under COMAR 26.11.01.11, on site for at least 5 years, and make available to the Department upon request. <b>[Reference: COMAR 26.11.03.06C and COMAR 26.11.01.11E(2)(d)].</b></p> <p><b>3. <u>Acid Rain Provisions</u></b>          The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75. <b>[Reference: See Acid Rain Permit]</b></p> <p><b>D. <u>Control of Nitrogen Oxides</u></b></p>
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	<p><b>1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT</b></p> <p><b>2. Healthy Air Act</b>            The Permittee shall maintain records sufficient to demonstrate compliance with the requirements of the Healthy Air Act, COMAR 26.11.27.            The Permittee shall maintain all information required to be reported or maintained under COMAR 26.11.01.11, on site for at least years, and make available to the Department upon request.  <b>[Reference: COMAR 26.11.03.06C and COMAR 26.11.01.11E(2)(d)].</b></p> <p><b>3. Acid Rain Provisions</b>            The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75. <b>[Reference: See Acid Rain Permit]</b></p>
<b>9.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>  <b>COMAR 26.11.01.10D. - Record Keeping and Reporting Requirements.</b>  <b><u>(1) System Downtime Reporting Requirements.</u></b>            (a) All COM downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the first day on which downtime occurs.            (b) The COM downtime report shall include the reason, if known, for the breakdown and the estimated period of time that the COM will be down. The owner or operator shall notify the Department by telephone when the COM has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in 40 CFR Part 51 Appendix P, and is producing data.            (c) Except as otherwise approved by the Department and the EPA, a COM shall operate in compliance with the requirements of §B(2) of this regulation and collect data for at least 95 percent of the source's operating time during any calendar quarter. The alternative measurement plan required in §B(1)(b) of this regulation shall be used at all times when the COM fails to conform to performance standards required by §B(2) of this regulation during data collection.</p> <p><b><u>(2) Data Reporting Requirements.</u></b>            (a) A COM shall automatically reduce all data to six-minute block averages calculated from 24 or more equally spaced data points.            (b) All COM data shall be reported in a format approved by the Department.</p>

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(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:

- (i) The cause, time periods, and the opacity of all emissions which exceed the applicable quarterly, daily, and hourly emission standards as provided in COMAR 26.11.09.05A(4);
- (ii) The COM and installation downtimes, including the time and date of the beginning and end of each downtime period, and whether the downtime was scheduled;
- (iii) The cause of all COM downtime;
- (iv) The total operating time for the quarter, and the total time and percent of the operating time during the quarter that excess emissions occurred, and the percentage of COM downtime, during the calendar quarter;
- (v) Quarterly quality assurance activities;
- (vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status;
- (vii) Other information that the Department determines is necessary to evaluate the data or to ensure that compliance is achieved.”

**B. Control of Particulate Matter Emissions**

The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to the proposed test date and provide a 10-days’ notice prior to the scheduled test date. The Permittee shall submit the results of stack tests to the Department in a final report within 60 days from the date of the test completion. **[Reference: COMAR 26.11.06.03C, COMAR 26.11.02.02H and CPCN No. 9338, Condition B-IV-26 & 32]**

**C. Control of Sulfur Oxides**

**1.** The Permittee shall submit coal supplier certifications or sulfur in fuel analyses to the Department upon request. The Permittee shall comply with the reporting requirements of COMAR 26.11.01.11E(1) and E(2)

**“(1) CEM System Downtime Reporting Requirements.**

- (a) All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the breakdown.
- (b) The system breakdown report required by §E(1)(a) of this regulation shall include the reason, if known, for the breakdown and the estimated period of time that the CEM will be down. The owner or operator of the CEM shall notify the Department by telephone when an out-of-service CEM is back in operation and producing data that has met performance specifications for accuracy, reliability, and durability of acceptable

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	<p>monitoring systems, as provided in COMAR 26.11.31, and is producing data.</p> <p>(2) <u>CEM Data Reporting Requirements</u>.</p> <p>(a) All test results shall be reported in a format approved by the Department.</p> <p>(b) Certification testing shall be repeated when the Department determines that the CEM data may not meet performance specifications because of component replacement or other conditions that affect the quality of generated data.</p> <p>(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:</p> <p>(i) The cause, time periods, and magnitude of all emissions which exceed the applicable emission standards;</p> <p>(ii) The source downtime including the time and date of the beginning and end of each downtime period and whether the source downtime was planned or unplanned;</p> <p>(iii) The time periods and cause of all CEM downtime including records of any repairs, adjustments, or maintenance that may affect the ability of the CEM to meet performance specifications of emission data;</p> <p>(iv) Quarterly totals of excess emissions, installation downtime, and CEM downtime during the calendar quarter;</p> <p>(v) Quarterly quality assurance activities;</p> <p>(vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status; and</p> <p>(vii) Other information required by the Department that is determined to be necessary to evaluate the data, to ensure that compliance is achieved, or to determine the applicability of this regulation.</p> <p>(d) All information required by this regulation to be reported to the Department shall be retained and made available for review by the Department for a minimum of 2 years from the time the report is submitted.”</p> <p><b>[Reference: COMAR 26.11.06.03C and COMAR 26.11.01.11E(1) &amp; (2)]</b></p> <p><b>2. Healthy Air Act</b>  <b>COMAR 26.11.27.05 – <u>Monitoring and Reporting Requirements</u></b>  <b>“B.</b> Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.</p>
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	<p><b>C. Each report shall include:</b></p> <ul style="list-style-type: none"> <li>(1) Emissions performance results related to compliance with the emission requirements under this chapter;</li> <li>(2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;</li> <li>(3) A current compliance plan; and</li> <li>(4) Any other information requested by the Department.”</li> </ul> <p>The Permittee shall submit the following CEMS reports to the Department for all CEMS required to be operated with the boilers:</p> <ul style="list-style-type: none"> <li>(a) CEM System Downtime Reports – All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the breakdown;</li> <li>(b) Quarterly CEM Summary Reports – A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department and shall include the information required under COMAR 26.11.01.11E(2)(c)(i)-(vii). <b>[Reference: COMAR 26.11.01.11E(1) &amp; (2)]</b></li> </ul> <p><b>3. Acid Rain Provisions</b></p> <p>The Permittee shall comply with the reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. <b>[Reference: See the Acid Rain Permit]</b></p> <p><u>D. Control of Nitrogen Oxides</u></p> <p><b>1. NO<sub>x</sub> RACT Requirements – See Table IV-12: NO<sub>x</sub> RACT</b></p> <p><b>2. Healthy Air Act</b></p> <p><b>COMAR 26.11.27.05 – <u>Monitoring and Reporting Requirements</u></b></p> <p>“B. Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.</p> <p><b>C. Each report shall include:</b></p> <ul style="list-style-type: none"> <li>(1) Emissions performance results related to compliance with the emission requirements under this chapter;</li> <li>(2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;</li> </ul>
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	<p>(3) A current compliance plan; and            (4) Any other information requested by the Department.”</p> <p>The Permittee shall submit the following CEMS reports to the Department for all CEMS required to be operated with the boilers:            (a) CEM System Downtime Reports – All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the breakdown;            (b) Quarterly CEM Summary Reports – A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department and shall include the information required under COMAR 26.11.01.11E(2)(c)(i)-(vii). <b>[Reference: COMAR 26.11.01.11E(1) &amp; (2)]</b></p> <p><b>3. Acid Rain Provisions</b>            The Permittee shall comply with the reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. <b>[Reference: See the Acid Rain Permit]</b></p>

<b>Table IV-9a</b>		
<b>COMPLIANCE ASSURANCE MONITORING REQUIREMENTS – PART 64</b>		
<b>Electrostatic Precipitator (ESP) for FSC-HAW-Unit 3</b>		
<b>Applicable Requirement</b>	<b>PM:</b> Emission limit: 0.03 gr/scfd @ 50% excess air. COMAR 26.11.09.06B(3).	
I. Indicator	Indicator #1 Continuous Opacity Monitor (COM)	Indicator #2 Monitor ESP Power Management Alarm: Audible and visual alarm integrated with the power management system of the ESP
Measurement Approach	Opacity data is measured and recorded by a certified opacity monitoring system	Operators oversee the ESP unit operation and will react as appropriate to control system alarms that indicate abnormal operation
II. Indicator Range	An internal, non-enforceable trigger level of 15.4% average opacity is established. The unit operators will take corrective action when the trigger level is exceeded	The activation of the alarm indicates possible operation of the ESP outside the normal operating conditions.

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III. Performance Criteria	The COM meets the performance criteria for installation and operation as specified in COMAR 26.11.01.10, COMAR 26.11.01.11, COMAR 26.11.31, and the more stringent requirements of the Acid Rain monitoring rules of 40 CFR Part 75	The operation of the power management system is continuously monitored
1. Data Representativeness	COM data will be collected and validated in accordance with COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.	The alarm points have been set to provide the operators with an early warning of potential ESP malfunction.
2. Verification of Operational Status (new or modified equipment)	COM data availability requirements are continuous data availability excluding audit and check periods and malfunctions that are corrected within two hours each day. CEM downtime up to 10% of operating time may initiate follow-up by MDE per COMAR 26.11.31.	Continuous monitoring will detect deviations from normal operating conditions of the power management system.
3. QA/QC Practices and Criteria	COM QA/QC procedures are consistent with the applicable requirements of COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.	Calibration, maintenance, and operation of the power management system in accordance with specifications.
4. Monitoring Frequency	Opacity is measured on a continuous basis with the exception of periods when the fans are shut off and there is no flame in the boiler.–Data from the backup monitoring system and ESP power management system will be used to indicate normal ESP performance during QA/QC periods or monitor malfunctions.	The power management system parameters will be monitored recorded at least four times within each operating hour.
5. Data Collection Procedures	Opacity data is collected in a certified Data Acquisition System (DAS) and is archived for at least five years.	The power management parameters are recorded using power management system DAS and electronically archived for at least 90 days, hard copy of event data will be stored for five years.
6. Averaging Period	One-minute average data is collected and stored. Three-hour block averages are calculated and stored based on the minute-by-minute data, for use as a compliance surrogate of Method 5 based in PM mass emission limits.	The power management alarm setting is set by the power management system OEM guidelines. So long as the ESP is being operated normally, the primary indicator (opacity) will be relied upon to indicate continuous compliance with the PM standard.

**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

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<b>Table IV – 9b</b>	
<b>9b.0</b>	<p><b><u>Emissions Unit Number(s): FSC-HAW-Unit3, FSC-BS-Unit1, FSC-BS-Unit2 &amp; FSC-BS-Aux1: Boilers Modification.</u></b></p> <p><b>FSC-BS-Unit1 and FSC-BS-Unit2:</b> Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the flyash separation equipment on site. The reburning of flyash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC). Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. <b>[MDE Reg. Nos. 3-0015 &amp; 3-0016]</b> <i>(Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).</i></p> <p><b>FSC-BS-AuxBlr1:</b> No. 2 oil-fired Auxiliary Boiler used for supplying steam to Brandon Shores Station. <b>[MDE Reg. Nos. 4-0507].</b> <b>FSC-BS-AuxBlr1</b> <i>received permit to construct in 2022 to add natural gas firing capability; modification expected to be completed by Dec 31,2025</i></p> <p><b>FSC-HAW-Unit3:</b> H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. <b>[MDE Reg. No. 3-0003]</b> <i>(Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).</i></p>
<b>9b.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p><u>Operational Limits</u>  <b>[Reference: MDE-ARA Permit to Construct No. 003-0468-3-0003, 3-0015, 3-0016 &amp; 4-0507 issued June 29, 2022]</b>      To demonstrate compliance synthetic minor status of “the project”, the installations being modified are subject to the following operational limit: total 12-month MMBtu heat input values (30,038,445 MMBtu/yr.) shall be assessed on a rolling monthly basis and shall not be exceeded without approval from the Department. This total 12-monthly heat input value includes the combined monthly heat inputs for <b>Wag 3, BS 1, BS 2, and BS Aux1</b> boilers.</p> <p>The Permittee shall revise the MATS Averaging/Implementation Plan to reflect the modification of <b>Wag 3, BS 1 and BS 2</b> and submit to the</p>

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<b>Table IV – 9b</b>	
	<p>Department for review and approval within 60 days after each of the units discontinue coal combustion, if applicable.</p> <p>The Permittee shall amend the NO<sub>x</sub> RACT averaging Plan to reflect <b>Wag 3, BS 1 and BS 2</b> revised NO<sub>x</sub> limit of 0.3 lbs./MMBtu and submit to the Department for review and approval within 60 days after each of the units discontinue coal combustion.</p>
<b>9b.2</b>	<p><b><u>Testing Requirements</u></b></p> <p><u>Operational Limits</u> See Monitoring Requirement</p>
<b>9b.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p><u>Operational Limits</u> The Permittee shall calculate: (a) the monthly total MMBtu heat input for <b>Wag 3, BS 1, and BS 2</b> using the hourly heat input values required to be recorded and reported under 40 CFR Part 75 CEMS requirements; (b) the monthly heat input for <b>BS Aux1</b> from the average heat content of the #2 fuel oil and natural gas and fuel usages for each month.</p> <p>After project completion, the Permittee must complete a tune-up on <b>BS Aux1</b> (Limited use boiler) every five years as specified in §63.7540. <i>Limited use boiler</i> must conduct tune-up as specified in paragraphs (a)(10)(i) through (vi) of §63.7540 to demonstrate continuous compliance. The Permittee shall conduct initial tune-up upon initial start-up of the boiler. <b>[Reference: §63.7515(d)]</b></p> <p>After project completion, the Permittee must complete a tune-up (<b>Wag 2, BS 1 &amp; BS 2</b>) of the EGU burner and combustion controls at least each 36 calendar months, or each 48 calendar months if neural network combustion optimization software is employed, as specified in §63.10021(e). <b>[Reference: MDE-ARA Permit to Construct No. 003-0468-3-0003, 3-0015, 3-0016 &amp; 4-0507 issued June 29, 2022]</b></p>
<b>9b.4</b>	<p><b><u>Record Keeping Requirements:</u></b></p> <p><b>Note:</b> All records must be maintained for a period of at least 5 years. <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p><u>Operational Limits</u></p>

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<b>Table IV – 9b</b>	
	<p>The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, records of the following information:</p> <p>(1) Fuel usage for the days that <b>Wag 3, BS 1 &amp; BS 2 and BS Aux1</b> boilers operated.</p> <p>(2) The 24-month block capacity factor for <b>Wag 3, BS 1 &amp; BS 2</b> boilers for the contiguous period commencing on the first of the month following completion of fuel switch.</p> <p>(3) The annual capacity factor for the <b>BS Aux1</b> boiler.</p> <p>(4) Tune-up conducted on <b>BS Aux1</b> boiler. [Reference: <b>§63.7555(a)(3)</b>]</p> <p>(5) Tune-up conducted on <b>Wag 3, BS 1 &amp; BS 2</b> boilers. [Reference: <b>§63.9991</b>]</p> <p>(6) The total 12-month rolling MMBtu heat inputs combined for <b>Wag 3, BS 1, BS 2, and BS Aux1</b> boilers  <b>[Reference: MDE-ARA Permit to Construct No. 003-0468-3-0003, 3-0015, 3-0016 &amp; 4-0507 issued June 29, 2022]</b></p>
<b>9b.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><u>Operational Limits</u>          See Record Keeping Requirements.</p>

**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

<b>Table IV – 10</b>	
<b>10.0</b>	<p><b><u>Emissions Unit Number(s): FSC-HAW-CT: Combustion Turbine</u></b></p> <p><b>FSC-HAW-CT:</b> H.A. Wagner combustion turbine is No. 2 oil fired combustion turbine used to supply “black start” capability to H.A. Wagner and for peaking operation. [MDE Reg. No 4-0007]</p>
<b>10.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p>A. <u>Control of Visible Emissions</u>  <b>COMAR 26.11.09.05A(2) – Fuel Burning Equipment</b>          “Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than</p>

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	<p>water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.”</p> <p><b>COMAR 26.11.09.05A(3) - Exceptions.</b> “Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:</p> <p>(a) The visible emissions are not greater than 40 percent opacity; and</p> <p>(b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.”</p> <p><b>B. <u>Control of Sulfur Oxides Emissions</u></b></p> <p><b>COMAR 26.11.09.07: <u>Control of Sulfur Oxides from Fuel Burning Equipment.</u></b></p> <p>“<b>A. Sulfur Content Limitations for Fuel.</b> A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:</p> <p>(2) In Areas III and IV: <b>(b) Distillate fuel oils, 0.3 percent.</b></p> <p><b>C. <u>Control of Nitrogen Oxides Emissions</u></b></p> <p><b>COMAR 26.11.09.08G – <u>Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 percent or less and Combustion Turbines with a Capacity Factor Greater than 15 percent.</u></b></p> <p>(1) A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:</p> <p>(a) Provide certification of the capacity factor of the equipment to the Department in writing;</p> <p>(b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;</p> <p>(c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;</p> <p>(d) <i>Not Applicable</i>, and</p> <p>(e) <i>Not Applicable.</i> “</p>
<b>10.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p><b>A. <u>Control of Visible Emissions</u></b>          See Monitoring Requirement</p>

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<b>Table IV – 10</b>	
	<p><b>B. <u>Control of Sulfur Oxides Emissions</u></b>            See Monitoring Requirement.</p> <p><b>C. <u>Control of Nitrogen Oxides Emissions</u></b>            The Permittee shall perform a combustion analysis and optimize combustion at least once annually when hours of operation exceed 500 during the calendar year. <b>[Reference: COMAR 26.11.09.08G(1)(b)]</b></p>
<b>10.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p><b>A. <u>Control of Visible Emissions</u></b>            The Permittee shall verify that there are no visible emissions when burning No. 2 fuel oil. An observer shall perform an EPA Reference Method 9 observation of stack emissions for an 18-minute period at least once for every 168 hours block of operation on oil or at a minimum once per calendar year.</p> <p>The Permittee shall perform the following if emissions are visible to human observer:</p> <ul style="list-style-type: none"> <li>(a) inspect combustion control system and combustion turbine operations,</li> <li>(b) perform all necessary adjustments and/or repairs to the combustion turbine within 48 hours of operation so that visible emissions are eliminated; and</li> <li>(c) document in writing the results of inspections, adjustments and/or repairs to the combustion turbine.</li> </ul> <p>After 48 hours of operation if the required adjustments and/or repairs had not eliminated the visible emissions, the Permittee shall perform another Method 9 observation once daily when the combustion turbine is operating on No.2 fuel oil for 18 minutes until corrective action have eliminated visible emissions. <b>[Reference: COMAR 26.11.03.06C].</b></p> <p><b>B. <u>Control of Sulfur Oxides Emissions</u></b>            The Permittee shall obtain fuel supplier certification stating that the fuel oil is in compliance with the sulfur content in the fuel limitation or obtain sulfur in fuel analyses of oil that is representative of the oil burned. <b>[Reference: COMAR 26.11.03.06C].</b></p> <p><b>C. <u>Control of Nitrogen Oxides Emissions</u></b>            The Permittee shall calculate the capacity factor of the combustion turbine for each calendar year within 30 days after the end of each year. <b>[Reference: COMAR 26.11.03.06C]</b></p>



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<b>10.4</b>	<p><b><u>Record Keeping Requirements:</u></b>  <b>Note:</b> All records must be maintained for a period of at least 5 years. <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p>A. <u>Control of Visible Emissions</u>            The Permittee shall maintain records of the results of visual emissions observations for a period of at least 5 years. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>B. <u>Control of Sulfur Oxides Emissions</u>            The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with the sulfur content in the fuel limitation or the sulfur in fuel analyses for at least 5 years. <b>[Reference: COMAR 26.11.03.06C].</b></p> <p>C. <u>Control of Nitrogen Oxides Emissions</u>            The Permittee shall maintain the following:            1. Records of the calculated capacity factors;            2. Records of hours of operation; and            3. Records of the results of combustion analysis performed if the hours of operation exceed 500.  <b>[Reference: COMAR 26.11.09.08G(1)(c) &amp; COMAR 26.11.03.06C]</b></p>
<b>10.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p>A. <u>Control of Visible Emissions</u>            The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, “Report of Excess Emissions and Deviations.” <b>[Reference: COMAR 26.11.03.06C].</b></p> <p>B. <u>Control of Sulfur Oxides Emissions</u>            The Permittee shall submit fuel certification report or fuel analyses if requested by the Department. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p>C. <u>Control of Nitrogen Oxides Emissions</u>            The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing by April 1<sup>st</sup> of the following calendar year. <b>[Reference: COMAR 26.11.09.08G(1)(a) &amp; COMAR 26.11.03.06C]</b></p>

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“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

<b>Table IV – 11</b>	
<b>11.0</b>	<p><b><u>Emissions Unit Number(s): FSC-HAW-MH</u></b></p> <p>The H.A. Wagner material handling system consists of various equipment and processes to transport coal, fly ash, hydrated lime or equivalent, powdered activated carbon and other materials. There are facilities to mix coal with additives to reduce stack emissions. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment. <b>[MDE Reg. No. 6-1144]</b></p>
<b>11.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p>A. <u>Control of Particulate Matter Emissions</u>  <b>1. COMAR 26.11.06.03B. - <u>Particulate Matter from Confined Sources.</u></b>  “(2) Areas III and IV. (a) A person may not cause or permit to be discharged into the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD (68.7 mg/dscm).”</p> <p>The Permittee shall design the DSI sorbent storage silo bin vent filters to achieve a controlled emission rate of no more than 0.03 gr/SCFD.  <b>[Reference: COMAR 26.11.02.02H]</b></p> <p><b>2. COMAR 26.11.06.03D - <u>Particulate Matter from Materials Handling and Construction.</u></b>  “A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, but not be limited to, the following when appropriate as determined by the control officer:  (1) Use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land.  (2) Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts.  (3) Installation and use of hoods, fans, and dust collectors to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting of buildings or other similar operations.</p>

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(4) Covering, at all times when in motion, open-bodied vehicles transporting materials likely to create air pollution. Alternate means may be employed to achieve the same results as would covering the vehicles.  
 (5) The paving of roadways and their maintenance in clean condition.  
 (6) The prompt removal from paved streets of earth or other material which has been transported there by trucks or earth moving equipment or erosion by water.”

**B. NSPS**

**40 CFR Part 60, Subpart Y—Standards of Performance for Coal Preparation and Processing Plants**

**§60.254 - Standards for coal processing and conveying equipment, coal storage systems, transfer and loading systems, and open storage piles.**

“(b) On and after the date on which the performance test is conducted or required to be completed under §60.8, whichever date comes first, an owner or operator of any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified after April 28, 2008, must meet the requirements in paragraphs (b)(1) through (3) of this section, as applicable to the affected facility.

(1) Except as provided in paragraph (b)(3) of this section, the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit 10 percent opacity or greater.

(2) The owner or operator must not cause to be discharged into the atmosphere from any mechanical vent on an affected facility gases which contain particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf).

(3) Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of paragraph (b)(1) of this section.”

***Note:*** *The limits in this section only apply to the four (4) coal conveyors that transport coal to and from the coal additive mixing facility.*

**C. CPCN No. 9338, Condition B-VI-3**

The Permittee shall apply a chemical; dust suppressant on an as needed basis to the sub bituminous coal storage pile in the coal yard to reduce fugitive PM emissions. The Permittee shall apply the chemical dust suppressant in accordance with manufacturer’s recommended application instructions. A dust suppressant shall also be applied, as needed to reduce fugitive PM emissions, to the following sub bituminous coal transfer points: Belt 1 to Belt 2 (barge unloading); Belt 2 to Belt 3; Belt 3 to MB Belt 3; Under-pile Syntron to MC Belt; MC Belt to Bradford Breaker;

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	Bradford Breaker to D Belt; Conveyor D to Pug Mill Feed Conveyor (or F Belt); Pug Mill Product Conveyor to Conveyor F; and F Belt to G Belt or M Belt.
<b>11.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p>A. <u>Control of Particulate Matter Emissions</u></p> <p>1. See Monitoring Requirement.</p> <p>2. See Record Keeping Requirements.</p> <p>B. <u>NSPS:</u></p> <p><b>§60.255 - Performance tests and other compliance requirements.</b>  “(b) An owner or operator of each affected facility that commenced construction, reconstruction, or modification after April 28, 2008, must conduct performance tests according to the requirements of §60.8 and the methods identified in §60.257 to demonstrate compliance with the applicable emissions standards in this subpart as specified in paragraphs (b)(1) and (2) of this section.  (2) For each affected facility subject to an opacity standard, an initial performance test must be performed. Thereafter, a new performance test must be conducted according to the requirements in paragraphs (b)(2)(i) through (iii) of this section, as applicable, except as provided for in paragraphs (e) and (f) of this section. Performance test and other compliance requirements for coal truck dump operations are specified in paragraph (h) of this section.  (i) If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test must be conducted within 90 operating days of the date that the previous performance test was required to be completed.  (ii) If all 6-minute average opacity readings in the most recent performance test are equal to or less than half the applicable opacity limit, a new performance test must be conducted within 12 calendar months of the date that the previous performance test was required to be completed.  (iii) An owner or operator of an affected facility continuously monitoring scrubber parameters as specified in §60.256(b)(2) is exempt from the requirements in paragraphs (b)(2)(i) and (ii) if opacity performance tests are conducted concurrently with (or within a 60-minute period of) PM performance tests.”  “(c) If any affected coal processing and conveying equipment (e.g., breakers, crushers, screens, conveying systems), coal storage systems, or coal transfer and loading systems that commenced construction,</p>

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<b>Table IV – 11</b>	
	<p>reconstruction, or modification after April 28, 2008, are enclosed in a building, and emissions from the building do not exceed any of the standards in §60.254 that apply to the affected facility, then the facility shall be deemed to be in compliance with such standards.”</p> <p>C. <u>CPCN No. 9338</u>          See Monitoring Requirements.</p>
<b>11.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p>A. <u>Control of Particulate Matter Emissions</u></p> <p>1. The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMP) Plan that will be used to prevent particulate matter from becoming airborne.</p> <p>The Permittee shall update the BMP Plan, as required by the initial Part 70 permit for this facility when a revision is needed to ensure that reasonable precautions will be used to prevent particulate matter from this equipment from becoming airborne and that adequate inspection will be conducted and documented. The BMP shall include provisions for routine inspections of emission sources and controls, corrective measures, and recordkeeping for such.</p> <p>The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the ash handling and solid fossil fuel handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material.  <b>[Reference: COMAR 26.11.03.06C.]</b></p> <p>2. See Record Keeping Requirements.</p> <p>B. <u>NSPS</u>          See Record Keeping Requirements.</p> <p>C. <u>CPCN No. 9338</u>          The Permittee shall perform a monthly inspection of the material handling transfer points and operations to verify that the reasonable precautions</p>

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<b>Table IV – 11</b>	
	<p>(e.g., BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the solid fossil fuel handling system and the ash handling system to determine whether PM is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the solid fossil fuel handling and ash handling systems are transferring material. <b>[Reference: CPCN No. 9338 Condition B-VI-5 and COMAR 26.11.02.02H]</b></p>
<b>11.4</b>	<p><b><u>Record Keeping Requirements:</u></b>  <b><u>Note:</u></b> All records must be maintained for a period of at least 5 years. <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p><b>A. <u>Control of Particulate Matter Emissions</u></b></p> <p><b>1.</b> The Permittee shall keep the results of the monthly inspections for a period of five (5) years.          The Permittee shall maintain the written reasonable precautions (BMP) at the facility and make it available to the Department upon request. <b>[Reference: COMAR 26.11.03.06C]</b></p> <p><b>2.</b> The Permittee shall maintain records necessary to demonstrate compliance with the filterable PM emission rate from the DSI sorbent storage silo bin vent filters, including equipment specifications, and make these records available to the Department upon request. <b>[Reference: COMAR 26.11.02.02H]</b></p> <p><b>B. <u>NSPS</u></b>  <b>§60.258 - <u>Reporting and Recordkeeping.</u></b>  <b>“(a)</b> The owner or operator of a coal preparation and processing plant that commenced construction, reconstruction, or modification after April 28, 2008, shall maintain in a logbook (written or electronic) on-site and make it available upon request. The logbook shall record the following:  <b>(1)</b> The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from manufacturer recommendation, if any, shall be noted.  <b>(2)</b> The date and time of periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted.  <b>(3)</b> The amount and type of coal processed each calendar month.</p>

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	<p>(4) The amount of chemical stabilizer or water purchased for use in the coal preparation and processing plant.</p> <p>(5) Monthly certification that the dust suppressant systems were operational when any coal was processed, and that manufacturer's recommendations were followed for all control systems. Any variance from the manufacturer's recommendations, if any, shall be noted.</p> <p>(6) Monthly certification that the fugitive coal dust emissions control plan was implemented as described. Any variance from the plan, if any, shall be noted. A copy of the applicable fugitive coal dust emissions control plan and any letters from the Administrator providing approval of any alternative control measures shall be maintained with the logbook. Any actions, e.g., objections, to the plan and any actions relative to the alternative control measures, e.g., approvals, shall be noted in the logbook as well.”</p> <p><b>C. <u>CPCN No. 9338</u></b>      The Permittee shall update the facility’s existing plan that contains an explanation of the reasonable precautions or BMPs that will be used to prevent particulate matter from becoming airborne. The updated BMPs shall also document procedures for chemical dust suppressant application. The Permittee shall update the BMP within 6 months of the CPCN issuance.</p> <p>The Permittee shall keep the results of the monthly inspections for a period of five (5) years.</p> <p>The Permittee shall maintain the written reasonable precautions (e.g., BMPs) at the facility and make it available to the Department upon request.  <b>[Reference: CPCN No. 9338 Condition B-VI-4, 6, 7 and COMAR 26.11.02.02H]</b></p>
<b>11.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><b>A. <u>Control of Particulate Matter Emissions</u></b></p> <p><b>1.</b> The Permittee shall report the results of the inspections and provide a copy of the current BMP plan upon request by the Department.  <b>[Reference: COMAR 26.11.03.06C]</b></p> <p><b>2.</b> See Record Keeping Requirements.</p>

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	<p><b>B. NSPS</b>  <b>§60.258 - Reporting and recordkeeping</b>            “(b) For the purpose of reports required under section 60.7(c), any owner operator subject to the provisions of this subpart also shall report semiannually periods of excess emissions as follow:            (3) All 6-minute average opacities that exceed the applicable standard.”            “(d) After July 1, 2011, within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with this subpart, the owner or operator of the affected facility must submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE data base available at <a href="http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main">http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main</a>. For performance tests that cannot be entered into WebFIRE (<i>i.e.</i>, Method 9 of appendix A-4 of this part opacity performance tests) the owner or operator of the affected facility must mail a summary copy to United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; mail code: D243-01; RTP, NC 27711.”</p> <p><b>C. CPCN No. 9338</b>            The Permittee shall report the results of the inspections and provide a copy of the current BMP plan upon request by the Department.  <b>[Reference: CPCN No. 9338 Condition B-VI-8 and COMAR 26.11.02.02H]</b></p>

“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

<b>Table IV - 12: NO<sub>x</sub> RACT</b>	
<b>12.0</b>	<p><b><u>Emissions Unit Number(s): FSC-BS-Unit1 &amp; FSC-BS-Unit2; FSC-HAW-Unit1 &amp; FSC-HAW-Unit4; FSC-HAW-Unit2 &amp; FSC-HAW-Unit3</u></b>  <b><u>(Cont'd)</u></b></p> <p><b>FSC-BS-Unit1 and FSC-BS-Unit2:</b> Two (2) solid fossil fuel-fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site.  <b>[MDE Reg. Nos.3-0015 &amp; 3-0016].</b> (<i>Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025</i>).</p>



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<b>Table IV - 12: NO<sub>x</sub> RACT</b>																					
	<p><b>FSC-HAW-Unit1:</b> H.A. Wagner Unit 1 is a residual oil or natural gas fired unit. [MDE Reg. No. 5-0469]</p> <p><b>FSC-HAW-Unit4:</b> H.A. Wagner Unit 4 is a residual oil-fired unit with natural gas fired used for start-up. [MDE Reg. No 4-0017]</p> <p><b>FSC-HAW-Unit2:</b> H.A. Wagner Unit 2 is a natural gas fired unit rated at 250-MMBtu/hr. equipped with low NO<sub>x</sub> burners. [MDE Reg. No. 3-0017] (<i>modified in 2020-fuel switch from coal fired to natural gas fired</i>).</p> <p><b>FSC-HAW-Unit3:</b> H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. [MDE Reg. No 3-0003] (<i>Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025</i>).</p>																				
<b>12.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p><u>Control of Nitrogen Oxides</u>  <b><u>NO<sub>x</sub> RACT Requirements</u></b>  <b>NO<sub>x</sub> RACT Averaging Plan Consent Decree dated April 8, 2021, and COMAR 26.11.09.08</b> which requires that the Fort Smallwood Road Complex (Brandon Shores Unit 1, Brandon Shores Unit 2, H.A. Wagner Unit 1, H.A. Wagner Unit 2, H.A. Wagner Unit 3, and H.A. Wagner Unit 4) meet the following NO<sub>x</sub> RACT limits:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th colspan="3" style="text-align: center;">Table 1 – Summary of NO<sub>x</sub> RACT Averaging Plan Limits (2016)</th> </tr> <tr> <th style="width: 30%;">Facility</th> <th style="width: 30%;">Unit</th> <th style="width: 40%;">RACT Limit, lb./MMBtu</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="text-align: center;">Brandon Shores</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0.5</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">0.5</td> </tr> <tr> <td rowspan="4" style="text-align: center;">H.A. Wagner</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0.3</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">0.3</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">0.5</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">0.3</td> </tr> </tbody> </table> <p>Individual unit compliance with NO<sub>x</sub> RACT requirements will be determined daily on a 30-day rolling average basis. Annual compliance will also be demonstrated by showing that annual mass emissions from the units in the averaging plan are less than 70% of the mass emissions that would have been allowed on an individual basis.</p>	Table 1 – Summary of NO <sub>x</sub> RACT Averaging Plan Limits (2016)			Facility	Unit	RACT Limit, lb./MMBtu	Brandon Shores	1	0.5	2	0.5	H.A. Wagner	1	0.3	2	0.3	3	0.5	4	0.3
Table 1 – Summary of NO <sub>x</sub> RACT Averaging Plan Limits (2016)																					
Facility	Unit	RACT Limit, lb./MMBtu																			
Brandon Shores	1	0.5																			
	2	0.5																			
H.A. Wagner	1	0.3																			
	2	0.3																			
	3	0.5																			
	4	0.3																			

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**Table IV - 12: NO<sub>x</sub> RACT**

The following methodology will be used to calculate 30-day rolling emissions and determine compliance:

- (1) Calculate daily system and NO<sub>x</sub> RACT emission rates:

$$ER_{System} = \sum (ER_i * (HI_i / HI_{Total}))$$

$$ER_{RACT} = \sum (ER_{RACT,i} * (HI_i / HI_{Total}))$$

where:

ER<sub>System</sub> = System average emission rate, lb./MMBtu  
 ER<sub>RACT</sub> = System average NO<sub>x</sub> RACT limit, lb./MMBtu  
 ER<sub>i</sub> = Daily emission rate for unit i, lb./MMBtu  
 ER<sub>RACT,i</sub> = Daily NO<sub>x</sub> RACT limit for unit i, lb./MMBtu  
 HI<sub>i</sub> = Daily heat input for unit i, MMBtu  
 HI<sub>Total</sub> = Daily heat for all of the units =  $\sum HI_i$ , MMBtu

- (2) After 30 days, calculate 30-day rolling emission rate for the system and the NO<sub>x</sub> RACT:

$$ER_{30 \text{ Day System}} = (\sum (ER_{System})) / 30$$

$$ER_{30 \text{ Day RACT}} = (\sum (ER_{RACT})) / 30$$

where:

ER<sub>30 Day System</sub> = 30-day rolling system average emission rate, MMBtu/lb  
 ER<sub>30 Day RACT</sub> = 30-day rolling system average emission rate, MMBtu/lb

- (3) Calculate mass emissions on a daily basis:

$$NO_X \text{ 30 Day System} = ER_{30 \text{ Day System}} * HI_{Total} / 2000$$

$$NO_X \text{ RACT} = ER_{30 \text{ Day RACT}} * HI_{Total} / 2000$$

where:

NO<sub>x</sub> 30 Day System = NO<sub>x</sub> mass emissions based on a 30-day rolling system average emission rate, tons  
 NO<sub>x</sub> RACT = NO<sub>x</sub> mass emissions based on a 30-day rolling RACT limit, tons

- (4) Determine compliance with NO<sub>x</sub> RACT:

$$NO_X \text{ System} < NO_X \text{ RACT}$$

In addition, on a yearly basis Raven will certify that the NO<sub>x</sub> mass emissions for the six units included in the averaging plan did not exceed 70% of the emissions allowable under the NO<sub>x</sub> RACT limits.

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<b>Table IV - 12: NO<sub>x</sub> RACT</b>	
	<p style="text-align: center;"><math>NO_{X \text{ Annual System}} &lt; 0.70 * NO_{X \text{ RACT Total}}</math></p> <p>where:</p> <p style="margin-left: 40px;"><math>NO_{X \text{ Annual System}} = \text{Annual } NO_{X} \text{ mass emissions for the units in the averaging plan}</math></p> <p style="margin-left: 40px;"><math>NO_{X \text{ RACT Total}} = \text{Allowable } NO_{X} \text{ mass emissions based on the } NO_{X} \text{ RACT limits}</math></p>
<b>12.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p><u>Control of Nitrogen Oxides</u>          See Monitoring Requirements.</p>
<b>12.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p><u>Control of Nitrogen Oxides</u>          All the units included in the most recent Averaging Plan have continuous emissions monitors (CEM) for monitoring NO<sub>x</sub> emissions. These units follow the operations, maintenance, recordkeeping, and reporting requirements contained in 40 CFR Part 75. <b>[Reference: Consent Agreement dated April 8, 2021]</b></p> <p>The Permittee shall operate, calibrate, and maintain a certified NO<sub>x</sub> CEM or an alternative NO<sub>x</sub> monitoring method approved by the Department and the EPA on each installation. <b>[Reference: COMAR 26.11.09.08C(3)]</b></p> <p>The Permittee certify CEMs in accordance with Part 75, Appendix A. <b>[Reference: COMAR 26.11.09.08B(2)(b)]</b></p>
<b>12.4</b>	<p><b><u>Record Keeping Requirements:</u></b></p> <p><u>Control of Nitrogen Oxides</u>          The Permittee shall maintain at each of the Generating Units records and information adequate to verify the calculations used to demonstrate compliance with the Averaging Plan's requirements and shall make these records and information available to the Department upon request. The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E. <b>[Reference: COMAR 26.11.01.11A(2) and COMAR 26.11.01.11E]</b></p>

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<b>Table IV - 12: NO<sub>x</sub> RACT</b>	
<b>12.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><u>Control of Nitrogen Oxides</u>            Quarterly reports will be submitted within 30 days of the end of each reporting quarter summarizing compliance with the Averaging Plan.  <b>[Reference: Consent Agreement dated April 8, 2021]</b></p> <p>The Permittee shall submit quarterly emission reports of CEM data to the Department on or before the thirtieth day of the month following the end of each calendar quarter.” <b>[Reference: COMAR 26.11.09.08K(1)]</b></p> <p>The Permittee shall comply with the reporting requirements of COMAR 26.11.01.11E. (Record Keeping and Reporting Requirements).  <b>[Reference: COMAR 26.11.01.11E]</b></p>

**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

**Please Note:** On June 29, 2015, the Supreme Court issued an opinion in *Michigan et al v. Environmental Protection Agency*. The Supreme Court's decision remands the MATS rule to EPA and returns the matter to the U.S. Court of Appeals for the D.C. Circuit for further proceedings. As of the issuance of this permit, the MATS rule is in effect. The Supreme Court decision in *Michigan* requires the EPA to undertake additional proceedings for the limited purpose of evaluating costs for its “appropriate and necessary” finding which preceded the MATS rule.

On December 27, 2018, EPA issued a proposed revised Supplemental Cost Finding for the Mercury and Air Toxics Standards, as well as the Clean Air Act required “risk and technology review.” After taking account of both the cost to coal- and oil-fired power plants of complying with the MATS rule (costs that range from \$7.4 to \$9.6 billion annually) and the benefits attributable to regulating hazardous air pollutant (HAP) emissions from these power plants (quantifiable benefits that range from \$4 to \$6 million annually), as EPA was directed to do by the United States Supreme Court, the Agency proposes to determine that it is not “appropriate and necessary” to regulate HAP emissions from power plants under Section 112 of the Clean Air Act.

**On October 4, 2019** EPA sent the revised Supplemental Cost Finding and Residual Risk and Technology Review to the Office of Management and Budget for review. *This is typically the last step before the final rule is released.*

**On July 17, 2020**, the U.S. Environmental Protection Agency (EPA) finalized revisions to the electronic reporting requirements for the Mercury and Air Toxics Standards (MATS). This final action revises and streamlines those requirements, increases data transparency by requiring use of one electronic reporting system - the Emissions Collection and Monitoring Plan System (ECMPS) Client Tool - instead of two separate systems and provides enhanced access to MATS data. No new monitoring requirements

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are imposed by this final action. This final action also extends the current deadline for alternative electronic data submission via portable document format (PDF) files through December 31, 2023.

Until and unless the MATS rule is stayed and/or vacated by the D.C. Circuit, MATS related conditions in the Title V permit apply. If the MATS rule is stayed and/or vacated or partially stayed and/or vacated, then the affected conditions in the Title V permit will be revised/removed accordingly.

**Table IV – 13: MACT Subpart UUUUU**

<b>13.0</b>	<p><b><u>Emissions Unit Number(s): FSC-BS-Unit1 &amp; FSC-BS-Unit2; FSC-HAW-Unit1 &amp; FSC-HAW-Unit4; &amp; FSC-HAW-Unit3 (Cont'd)</u></b></p> <p><b>FSC-BS-Unit1 and FSC-BS-Unit2:</b> Two (2) solid fossil fuel-fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site. <b>[MDE Reg. Nos. 3-0015 &amp; 3-0016]</b> <i>(Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).</i> <b>Will be Limited-use boilers upon completion of fuel switch.</b></p> <p><b>FSC-HAW-Unit1:</b> H.A. Wagner Unit1 is a residual oil or <b>natural gas</b> fired unit <b>[5-0469]</b>  <b>FSC-HAW-Unit1 operates as limited-use liquid oil-fired unit and is only subject to tune-up requirements.</b>  <i>Limited-use liquid oil-fired subcategory means an oil-fired electric utility steam generating unit with an annual capacity factor of less than 8 percent of its maximum or nameplate heat input, whichever is greater, averaged over a 24-month block contiguous period commencing [Reference: §63.10042]</i></p> <p><b>FSC-HAW-Unit4:</b> H.A. Wagner Unit4 is a residual oil-fired unit with natural gas fired used for start-up. <b>[MDE Reg. No. 4-0017].</b>  <b>FSC-HAW- Unit4 operates as limited-use liquid oil-fired unit and is only subject to tune-up requirements.</b>  <i>Limited-use liquid oil-fired subcategory means an oil-fired electric utility steam generating unit with an annual capacity factor of less than 8 percent of its maximum or nameplate heat input, whichever is greater, averaged over a 24-month block contiguous period commencing [Reference: §63.10042-What definitions apply to this subpart]</i></p> <p><b>FSC-HAW-Unit3:</b> H.A. Wagner Unit3 is a coal fired unit with natural gas used for start-up. <b>[MDE Reg. No. 3-0003]</b> <i>(Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).</i> <b>Will be a Limited-use boiler upon completion of fuel switch.</b></p>
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<b>Table IV – 13: MACT Subpart UUUUU</b>	
<b>13.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p><u>Control of HAP Emissions</u>  <b>40 CFR Part 63, Subpart UUUUU—National Emission Standards for Hazardous Air Pollutants: Coal and Oil-Fired Electric Utility Steam Generating Units.</b></p> <p><b>§63.9980 - <u>What is the purpose of this subpart?</u></b>          This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from coal- and oil-fired electric utility steam generating units (EGUs) as defined in §63.10042 of this subpart. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.  <i>Electric utility steam generating unit (EGU) means a fossil fuel-fired combustion unit of more than 25 megawatts electric (MWe) that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 MWe output to any utility power distribution system for sale is considered an electric utility steam generating unit.</i></p> <p><b>§63.9981 - <u>Am I subject to this subpart?</u></b>          “You are subject to this subpart if you own or operate a <b>coal-fired EGU</b> or an <b>oil-fired EGU</b> as defined in §63.10042 of this subpart.”</p> <p><b>§63.9984 - <u>When do I have to comply with this subpart?</u></b>          “(b) If you have an <b>existing EGU</b>, you must comply with this subpart no later than <b>April 16, 2015.</b>”          “(c) You must meet the notification requirements in §63.10030 according to the schedule in §63.10030 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.”          “(f) You must demonstrate that compliance has been achieved, by conducting the required performance tests and other activities, no later than 180 days after the applicable date in paragraph (a), (b), (c), (d), or (e) of this section.”</p> <p><b>§63.9991 - <u>What emission limitations, work practice standards, and operating limits must I meet?</u></b>          “(a) You must meet the requirements in paragraphs (a)(1) and (2) of this section. You must meet these requirements at all times.          (1) You must meet each emission limit and work practice standard in Table 1 through 3 to this subpart that applies to your EGU, for each EGU at your source, except as provided under §63.10009.</p>

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(2) You must meet each operating limit in Table 4 to this subpart that applies to your EGU.  
 (b) As provided in §63.6(g), the Administrator may approve use of an alternative to the work practice standards in this section.  
 (c) You may use the alternate SO<sub>2</sub> limit in Tables 1 and 2 to this subpart only if your EGU:  
 (1) Has a system using wet or dry flue gas desulfurization technology and SO<sub>2</sub> continuous emissions monitoring system (CEMS) installed on the EGU; and  
 (2) At all times, you operate the wet or dry flue gas desulfurization technology and the SO<sub>2</sub> CEMS installed on the EGU consistent with §63.10000(b).”

**Table 2 to Subpart UUUUU of Part 63—Emission Limits for Existing EGUs**

As stated in §63.9991, you must comply with the following applicable emission limits:<sup>1</sup>

If your EGU is in this subcategory	For the following pollutants	You must meet the following emission limits and work practice standards	Using these requirements, as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in Table 5
1. Coal-fired unit not low rank virgin coal <b>BS-Unit1 &amp; BS-Unit2</b> <b>HAW-Unit3</b>	a. Filterable particulate matter (PM)	3.0E-2 lb./MMBtu or 3.0E-1 lb./MWh. <sup>2</sup>	Collect a minimum of 1 dscm per run. <b>Please Note: PM CEMs will be used for FSC-BS-Units1&amp;2</b>
	b. Hydrogen chloride (HCl)	2.0E-3 lb./MMBtu or 2.0E-2 lb./MWh.	For Method 26A, collect a minimum of 0.75 dscm per run; for Method 26, collect a minimum of 120 liters per run.
			For ASTM D6348-03 <sup>3</sup> or Method 320, sample for a minimum of 1 hour.
	c. Mercury (Hg)	1.2E0 lb./TBtu or 1.3E-2 lb./GWh	<b>Hg CEMS.</b>

<sup>1</sup>For LEE emissions testing for total PM, total HAP metals, individual HAP metals, HCl, and HF, the required minimum sampling volume must be increased nominally by a factor of two.

<sup>2</sup>Gross output.

<sup>3</sup>Incorporated by reference, see §63.14.

<sup>4</sup>You may not use the alternate SO<sub>2</sub> limit if your EGU does not have some form of FGD system and SO<sub>2</sub> CEMS installed.

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General Compliance Requirements

**§63.10000** - What are my general requirements for complying with this subpart?

“(a) You must be in compliance with the emission limits and operating limits in this subpart. These limits apply to you at all times except during periods of startup and shutdown; however, for **coal-fired, liquid oil-fired**, or solid oil-derived fuel-fired EGUs, you are required to meet the work practice requirements, items 3 and 4, in Table 3 to this subpart during periods of startup or shutdown.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the EPA Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.”

“(c)(1) For **coal-fired** units, IGCC units, and solid oil-derived fuel-fired units, initial performance testing is required for all pollutants, to demonstrate compliance with the applicable emission limits.

(i) For a **coal-fired** or solid oil-derived fuel-fired EGU or IGCC EGU, you may conduct the initial performance testing in accordance with §63.10005(h), to determine whether the EGU qualifies as a low emitting EGU (LEE) for one or more applicable emissions limits, except as otherwise provided in paragraphs (c)(1)(i)(A) and (B) of this section;  
(A) Except as provided in paragraph (c)(1)(i)(C) of this section, you may not pursue the LEE option if your coal-fired, IGCC, or solid oil-derived fuel-fired EGU is equipped with a main stack and a bypass stack or bypass duct configuration that allows the effluent to bypass any pollutant control device

(B) You may not pursue the LEE option for Hg if your coal-fired, solid oil-derived fuel-fired EGU or IGCC EGU is new.

(ii) *Not Applicable*

(iii) *Not Applicable.*

(iv) If your **coal-fired** or solid oil derived fuel-fired EGU or IGCC EGU does not qualify as a LEE for total non-mercury HAP metals, individual non-mercury HAP metals, or filterable particulate matter (PM), you must demonstrate compliance through an initial performance test and you must monitor continuous performance through either use of a particulate matter



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continuous parametric monitoring system (PM CPMS), a **PM CEMS**, or, for an existing EGU, compliance performance testing repeated quarterly.

(v) If your **coal-fired** or solid oil-derived fuel-fired EGU does not qualify as a LEE for hydrogen chloride (HCl), you may demonstrate initial and continuous compliance through use of an HCl CEMS, installed and operated in accordance with Appendix B to this subpart. As an alternative to HCl CEMS, you may demonstrate initial and continuous compliance by conducting an initial and periodic quarterly performance stack test for HCl. **If your EGU uses wet or dry flue gas desulfurization technology (this includes limestone injection into a fluidized bed combustion unit), you may apply a second alternative to HCl CEMS by installing and operating a sulfur dioxide (SO<sub>2</sub>) CEMS installed and operated in accordance with part 75 of this chapter to demonstrate compliance with the applicable SO<sub>2</sub> emissions limit.**

(vi) If your coal-fired or solid oil-derived fuel-fired EGU does not qualify as a LEE for Hg, you must demonstrate initial and continuous compliance through use of a Hg CEMS or a sorbent trap monitoring system, in accordance with appendix A to this subpart.

(A) *Not Applicable.*

(B) *Not Applicable.*

“(c)(2) For **liquid oil-fired EGUs**, except limited use liquid oil-fired EGUs, initial performance testing is required for all pollutants, to demonstrate compliance with the applicable emission limits.

(i) For an **existing liquid oil-fired unit**, you may conduct the performance testing in accordance with §63.10005(h), to determine whether the unit qualifies as a LEE for one or more pollutants. For a qualifying LEE for Hg emissions limits, you must conduct a 30-day performance test using Method 30B at least once every 12 calendar months to demonstrate continued LEE status. For a qualifying LEE of any other applicable emissions limits, you must conduct a performance test at least once every 36 calendar months to demonstrate continued LEE status.

(ii) If your liquid oil-fired unit does not qualify as a LEE for total HAP metals (including mercury), individual metals (including mercury), or filterable PM you must demonstrate compliance through an initial performance test and you must monitor continuous performance through either use of a PM CPMS, a PM CEMS, or, for an existing EGU, performance testing conducted quarterly.

(iii) If your existing liquid oil-fired unit does not qualify as a LEE for hydrogen chloride (HCl) or for hydrogen fluoride (HF), you may demonstrate initial and continuous compliance through use of an HCl CEMS, an HF CEMS, or an HCl and HF CEMS, installed and operated in

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accordance with Appendix B to this rule. As an alternative to HCl CEMS, HF CEMS, or HCl and HF CEMS, you may demonstrate initial and continuous compliance through periodic quarterly performance testing and parametric monitoring for HCl and HF. If you choose to use quarterly performance testing and parametric monitoring, then you must also develop a site-specific monitoring plan that identifies the CMS you will use to ensure that the operations of the EGU remains consistent with those during the performance test. As another alternative, you may measure or obtain, and keep records of, fuel moisture content; as long as fuel moisture does not exceed 1.0 percent by weight, you need not conduct other HCl or HF monitoring or testing.

**(iv) If your unit qualifies as a limited-use liquid oil-fired as defined in §63.10042, then you are not subject to the emission limits in Tables 1 and 2, but you must comply with the performance tune-up work practice requirements in Table 3. (This applies to FSC-HAW-Unit4; and upon completion of fuel switch to FSC-HW-Unit3, FSC-BS-Unit1 & FSC-BS-Unit2)**

“(d)(1) If you demonstrate compliance with any applicable emissions limit through use of a continuous monitoring system (CMS), where a CMS includes a continuous parameter monitoring system (CPMS) as well as a **continuous emissions monitoring system (CEMS)**, you must develop a site-specific monitoring plan and submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation (where applicable) of your CMS. This requirement also applies to you if you petition the Administrator for alternative monitoring parameters under §63.8(f). This requirement to develop and submit a site-specific monitoring plan does not apply to affected sources with existing monitoring plans that apply to CEMS and CPMS prepared under appendix B to part 60 or part 75 of this chapter, and that meet the requirements of §63.10010. Using the process described in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in this paragraph of this section and, if approved, include those in your site-specific monitoring plan. The monitoring plan must address the provisions in paragraphs (d)(2) through (5) of this section.

(2) The site-specific monitoring plan shall include the information specified in paragraphs (d)(5)(i) through (d)(5)(vii) of this section. Alternatively, the requirements of paragraphs (d)(5)(i) through (d)(5)(vii) are considered to be met for a particular CMS or sorbent trap monitoring system if:

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- (i) The CMS or sorbent trap monitoring system is installed, certified, maintained, operated, and quality-assured either according to part 75 of this chapter, or appendix A or B to this subpart; and
  - (ii) The recordkeeping and reporting requirements of part 75 of this chapter, or appendix A or B to this subpart that pertain to the CMS are met.
  - (3) If requested by the Administrator, you must submit the monitoring plan (or relevant portion of the plan) at least 60 days before the initial performance evaluation of a particular CMS, except where the CMS has already undergone a performance evaluation that meets the requirements of §63.10010 (e.g., if the CMS was previously certified under another program).
  - (4) You must operate and maintain the CMS according to the site-specific monitoring plan.
  - (5) The provisions of the site-specific monitoring plan must address the following items:
    - (i) Installation of the CMS or sorbent trap monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device). See §63.10010(a) for further details. For PM CPMS installations, follow the procedures in §63.10010(h).
    - (ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems.
    - (iii) Schedule for conducting initial and periodic performance evaluations.
    - (iv) Performance evaluation procedures and acceptance criteria (e.g., calibrations), including the quality control program in accordance with the general requirements of §63.8(d).
    - (v) On-going operation and maintenance procedures, in accordance with the general requirements of §§63.8(c)(1)(ii), (c)(3), and (c)(4)(ii).
    - (vi) Conditions that define a CMS that is out of control consistent with §63.8(c)(7)(i) and for responding to out-of-control periods consistent with §§63.8(c)(7)(ii) and (c)(8).
    - (vii) On-going recordkeeping and reporting procedures, in accordance with the general requirements of §§63.10(c), (e)(1), and (e)(2)(i), or as specifically required under this subpart.”
- “(e) As part of your demonstration of continuous compliance, you must perform periodic tune-ups of your EGU(s), according to §63.10021(e).”

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“(j) All air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of operations that cause your EGU to meet the definition of an EGU subject to this subpart must be installed and operational as of the date your source ceases to be or becomes subject to this subpart.”

“(k) All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of operations that cause your EGU to meet the definition of an EGU subject to this subpart must be installed and operational as of the date your source ceases to be or becomes subject to this subpart. All calibration and drift checks must be performed as of the date your source ceases to be or becomes subject to this subpart. You must also comply with provisions of §§63.10010, 63.10020, and 63.10021 of this subpart. Relative accuracy tests must be performed as of the performance test deadline for PM CEMS, if applicable. Relative accuracy testing for other CEMS need not be repeated if that testing was previously performed consistent with CAA section 112 monitoring requirements or monitoring requirements under this subpart.”

“(l) On or before the date an EGU is subject to this subpart, you must install, certify, operate, maintain, and quality assure each monitoring system necessary for demonstrating compliance with the work practice standards for PM or non-mercury HAP metals during startup periods and shutdown periods. You must collect, record, report, and maintain data obtained from these monitoring systems during startup periods and shutdown periods.”

**Table 3 to Subpart UUUUU of Part 63—Work Practice Standards**

As stated in §§63.9991, you must comply with the following applicable work practice standards:

<b>If your EGU is:</b>	<b>You must meet the following:</b>
1. An <b>existing</b> EGU	Conduct a tune-up of the EGU burner and combustion controls at least each 36 calendar months, or each 48 calendar months if neural network combustion optimization software is employed, as specified in §63.10021(e).
3. A <b>coal-fired, liquid oil-fired</b> (excluding limited-use liquid oil-fired subcategory units), or solid	You have the option of complying using either of the following work practice standards. (1) If you choose to comply using paragraph (1) of the definition of “startup” in §63.10042, you must operate all

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<p>oil-derived fuel-fired EGU <b>during startup</b></p> <p><b>BS-Unit1 &amp; BS-Unit2 HAW-Unit3 will comply with paragraph (1).</b></p>	<p>CMS during startup. Startup means either the first-ever firing of fuel in a boiler for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on site use). For startup of a unit, you must use clean fuels as defined in §63.10042 for ignition. Once you convert to firing coal, residual oil, or solid oil-derived fuel, you must engage all of the applicable control technologies except dry scrubber and SCR systems. You must start your dry scrubber and SCR systems, if present, appropriately to comply with relevant standards applicable during normal operation. You must comply with all applicable emissions limits at all times except for periods that meet the applicable definitions of startup and shutdown in this subpart. You must keep records during startup periods. You must provide reports concerning activities and startup periods, as specified in §63.10011(g) and §63.10021(h) and (i).</p>
	<p>(2) If you choose to comply using paragraph (2) of the definition of “startup” in §63.10042, you must operate all CMS during startup. You must also collect appropriate data, and you must calculate the pollutant emission rate for each hour of startup.</p>
	<p>For startup of an EGU, you must use one or a combination of the clean fuels defined in §63.10042 to the maximum extent possible, taking into account considerations such as boiler or control device integrity, throughout the startup period. You must have sufficient clean fuel capacity to engage and operate your PM control device within one hour of adding coal, residual oil, or solid oil-derived fuel to the unit. You must meet the startup period work practice requirements as identified in §63.10020(e).</p>
	<p>Once you start firing coal, residual oil, or solid oil-derived fuel, you must vent emissions to the main stack(s). You must comply with the applicable emission limits beginning with the hour after startup ends. You must engage and operate your particulate matter control(s) within 1 hour of first firing of coal, residual oil, or solid oil-derived fuel.</p>
	<p>You must start all other applicable control devices as expeditiously as possible, considering safety and manufacturer/supplier recommendations, but, in any case, when necessary to comply with other standards made applicable to the EGU by a permit limit or a rule other than this Subpart that require operation of the control devices.</p>
	<p>...You must collect monitoring data during startup periods, as specified in §63.10020(a) and (e). You must keep records</p>

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	<p>during startup periods, as provided in §§63.10032 and 63.10021(h). You must provide reports concerning activities and startup periods, as specified in §§63.10011(g), 63.10021(i), and 63.10031.</p>
<p><b>4. A coal-fired, liquid oil-fired (excluding limited-use liquid oil-fired subcategory units), or solid oil-derived fuel-fired EGU during shutdown</b></p>	<p>You must operate all CMS during shutdown. You must also collect appropriate data, and you must calculate the pollutant emission rate for each hour of shutdown for those pollutants for which a CMS is used.</p> <p>While firing coal, residual oil, or solid oil-derived fuel during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices and continue to operate those control devices after the cessation of coal, residual oil, or solid oil-derived fuel being fed into the EGU and for as long as possible thereafter considering operational and safety concerns. In any case, you must operate your controls when necessary to comply with other standards made applicable to the EGU by a permit limit or a rule other than this Subpart and that require operation of the control devices.</p>
	<p>If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the clean fuels defined in §63.10042 and must be used to the maximum extent possible, taking into account consideration such as not compromising boiler or control device integrity.</p>
	<p>You must comply with all applicable emission limits at all times except during startup periods and shutdown periods at which time you must meet this work practice. You must collect monitoring data during shutdown periods, as specified in §63.10020(a). You must keep records during shutdown periods, as provided in §§63.10032 and 63.10021(h). Any fraction of an hour in which shutdown occurs constitutes a full hour of shutdown. You must provide reports concerning activities and shutdown periods, as specified in §§63.10011(g), 63.10021(i), and 63.10031.</p>

**§63.10009 - May I use emissions averaging to comply with this subpart?**

“(a) *General eligibility.* (1) You may use emissions averaging as described in paragraph (a)(2) of this section as an alternative to meeting the requirements of §63.9991 for filterable PM, SO<sub>2</sub>, HF, HCl, non-Hg HAP metals, or Hg on an EGU-specific basis if:

- (i) You have more than one existing EGU in the same subcategory located at one or more contiguous properties, belonging to a single major industrial grouping, which are under common control of the same person (or persons under common control); and

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(ii) You use CEMS (or sorbent trap monitoring systems for determining Hg emissions) or quarterly emissions testing for demonstrating compliance.  
 (2) You may demonstrate compliance by emissions averaging among the existing EGUs in the same subcategory, if your averaged Hg emissions for EGUs in the “unit designed for coal ≥8,300 Btu/lb.” subcategory are equal to or less than 1.2 lb./TBtu or 1.3E-2 lb./GWh on a 30-boiler operating day basis or if your averaged emissions of individual, other pollutants from other subcategories of such EGUs are equal to or less than the applicable emissions limit in Table 2 to this subpart, according to the procedures in this section. Note that except for Hg emissions from EGUs in the “unit designed for coal ≥8,300 Btu/lb.” subcategory, the averaging time for emissions averaging for pollutants is 30 days (rolling daily) using data from CEMS or a combination of data from CEMS and manual performance (LEE) testing. The averaging time for emissions averaging for the alternate Hg limit (equal to or less than 1.0 lb./TBtu or 1.1E-2 lb./GWh) from EGUs in the “unit designed for coal ≥8,300 Btu/lb.” subcategory is 90- boiler operating days (rolling daily) using data from CEMS, sorbent trap monitoring, or a combination of monitoring data and data from manual performance (LEE) testing. For the purposes of this paragraph, 30- (or 90-day) group boiler operating days is defined as a period during which at least one unit in the emissions averaging group operates on each of the 30 or 90 days. You must calculate the weighted average emissions rate for the group in accordance with the procedures in this paragraph using the data from all units in the group including any that operate fewer than 30 (or 90) days during the preceding 30 (or 90) group boiler days.

(i) You may choose to have your EGU emissions averaging group meet either the heat input basis (MMBtu or TBtu, as appropriate for the pollutant) or gross electrical output basis (MWh or GWh, as appropriate for the pollutant).

(ii) You may not mix bases within your EGU emissions averaging group.

(iii) You may use emissions averaging for affected units in different subcategories if the units vent to the atmosphere through a common stack (see paragraph (m) of this section).

(b) *Equations.* Use the following equations when performing calculations for your EGU emissions averaging group:

(1) Group eligibility equations.

$$WAER_m = \frac{[\sum_{j=1}^p Herm_j \times Rmm_j] + \sum_{k=1}^m Ter_k \times Rmt_k}{(\sum_{j=1}^p Rmm_j) + \sum_{k=1}^m Rmt_k} \quad (Eq. 1a)$$

Where:

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WAER<sub>m</sub> = Maximum Weighted Average Emission Rate in terms of lb/heat input or lb/gross output,  
 Herm<sub>i,j</sub> = hourly emission rate (e.g., lb/MMBtu, lb/MWh) from CEMS or sorbent trap monitoring as  
 determined during the initial compliance determination from EGU j,  
 Rmm<sub>j</sub> = Maximum rated heat input, MMBtu/h, or maximum rated gross output, MWh/h, for EGU j,  
 p = number of EGUs in emissions averaging group that rely on CEMS,  
 Ter<sub>k</sub> = Emissions rate (lb/MMBTU or lb/MWh) as determined during the initial compliance  
 determination of EGU k,  
 Rmt<sub>k</sub> = Maximum rated heat input, MMBtu/h, or maximum rated gross output, MWh/h, for EGU k,  
 and  
 m = number of EGUs in emissions averaging group that rely on emissions testing.

$$WAER_m = \frac{\sum \left[ \left( \sum_{j=1}^p Herm_{i,j} \right) \times Smm_j \times Cfm_j \right] + \sum_{k=1}^m Ter_k \times Smt_k \times Cft_k}{\sum \left[ \sum_{j=1}^p Smm_j \times Cfm_j \right] + \sum_{k=1}^m Smt_k \times Cft_k} \quad (Eq. 1b)$$

Where:

Variables with the similar names share the descriptions for Equation 1a of this section,

Smm<sub>j</sub> = maximum steam generation, lb<sub>steam</sub>/h, or lb/gross output, for EGU j,  
 Cfm<sub>j</sub> = conversion factor, calculated from the most recent compliance test results, in terms units of  
 heat output or gross output per pound of steam generated (MMBtu/lb<sub>steam</sub> or MWh/lb<sub>steam</sub>) from  
 EGU j,  
 Smt<sub>k</sub> = maximum steam generation, lb<sub>steam</sub>/h, or lb/gross output, for EGU k, and  
 Cfm<sub>k</sub> = conversion factor, calculated from the most recent compliance test results, in terms units of  
 heat output or gross output per pound of steam generated (MMBtu/lb<sub>steam</sub> or MWh/lb<sub>steam</sub>) from  
 EGU k.

(2) Weighted 30-boiler operating day rolling average emissions rate equations for pollutants  
 other than Hg. Use Equation 2a or 2b of this section to calculate the 30-day rolling average  
 emissions daily.

$$WAER = \frac{\sum_{i=1}^p \left[ \sum_{t=1}^n (Her_i \times Rm_i) \right]_p + \sum_{i=1}^m (Ter_i \times Rt_i)}{\sum_{i=1}^p \left[ \sum_{t=1}^n (Rm_i) \right]_p + \sum_{i=1}^m Rt_i} \quad (Eq. 2a)$$

Where:

Her<sub>i</sub> = hourly emission rate (e.g., lb/MMBtu, lb/MWh) from unit i's CEMS for the preceding 30-group  
 boiler operating days,  
 Rm<sub>i</sub> = hourly heat input or gross output from unit i for the preceding 30-group boiler operating days,  
 p = number of EGUs in emissions averaging group that rely on CEMS or sorbent trap monitoring,  
 n = number of hours that hourly rates are collected over 30-group boiler operating days,  
 Ter<sub>i</sub> = Emissions rate from most recent emissions test of unit i in terms of lb/heat input or lb/gross  
 output,  
 Rt<sub>i</sub> = Total heat input or gross output of unit i for the preceding 30-boiler operating days, and  
 m = number of EGUs in emissions averaging group that rely on emissions testing.

$$WAER = \frac{\sum_{i=1}^p \left[ \sum_{t=1}^n (Her_i \times Sm_i \times Cfm_i) \right]_p + \sum_{i=1}^m (Ter_i \times St_i \times Cft_i)}{\sum_{i=1}^p \left[ \sum_{t=1}^n (Sm_i \times Cfm_i) \right]_p + \sum_{i=1}^m St_i \times Cft_i} \quad (Eq. 2b)$$

Where:

variables with similar names share the descriptions for Equation 2a of this section,  
 Sm<sub>i</sub> = steam generation in units of pounds from unit i that uses CEMS for the preceding 30-group  
 boiler operating days,



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Cfm<sub>i</sub> = conversion factor, calculated from the most recent compliance test results, in units of heat input per pound of steam generated or gross output per pound of steam generated, from unit i that uses CEMS from the preceding 30 group boiler operating days,  
 St<sub>i</sub> = steam generation in units of pounds from unit i that uses emissions testing, and  
 Cft<sub>i</sub> = conversion factor, calculated from the most recent compliance test results, in units of heat input per pound of steam generated or gross output per pound of steam generated, from unit i that uses emissions testing.

(3) Weighted 90-boiler operating day rolling average emissions rate equations for Hg emissions from EGUs in the “coal-fired unit not low rank virgin coal” subcategory. Use Equation 3a or 3b of this section to calculate the 90-day rolling average emissions daily.

$$WAER = \frac{\sum_{i=1}^p [\sum_{j=1}^n (Her_j \times Rm_i)]_p + \sum_{i=1}^m (Ter_i \times Rt_i)}{\sum_{i=1}^p [\sum_{j=1}^n (Rm_i)]_p + \sum_{i=1}^m Rt_i} \quad \text{(Eq. 3a)}$$

Where:

- Her<sub>i</sub> = hourly emission rate from unit i's CEMS or Hg sorbent trap monitoring system for the preceding 90-group boiler operating days,
- Rm<sub>i</sub> = hourly heat input or gross output from unit i for the preceding 90-group boiler operating days,
- p = number of EGUs in emissions averaging group that rely on CEMS,
- n = number of hours that hourly rates are collected over the 90-group boiler operating days,
- Ter<sub>i</sub> = Emissions rate from most recent emissions test of unit i in terms of lb/heat input or lb/gross output,
- Rt<sub>i</sub> = Total heat input or gross output of unit i for the preceding 90-boiler operating days, and
- m = number of EGUs in emissions averaging group that rely on emissions testing.

$$WAER = \frac{\sum_{i=1}^p [\sum_{j=1}^n (Her_j \times Sm_i \times Cfm_i)]_p + \sum_{i=1}^m (Ter_i \times St_i \times Cft_i)}{\sum_{i=1}^p [\sum_{j=1}^n (Sm_i \times Cfm_i)]_p + \sum_{i=1}^m St_i \times Cft_i} \quad \text{(Eq. 3b)}$$

Where:

- variables with similar names share the descriptions for Equation 2a of this section,
- Sm<sub>i</sub> = steam generation in units of pounds from unit i that uses CEMS or a Hg sorbent trap monitoring for the preceding 90-group boiler operating days,
- Cfm<sub>i</sub> = conversion factor, calculated from the most recent compliance test results, in units of heat input per pound of steam generated or gross output per pound of steam generated, from unit i that uses CEMS or sorbent trap monitoring from the preceding 90-group boiler operating days,
- St<sub>i</sub> = steam generation in units of pounds from unit i that uses emissions testing, and
- Cft<sub>i</sub> = conversion factor, calculated from the most recent emissions test results, in units of heat input per pound of steam generated or gross output per pound of steam generated, from unit i that uses emissions testing.

(c) *Separate stack requirements.* For a group of two or more existing EGUs in the same subcategory that each vent to a separate stack, you may average filterable PM, SO<sub>2</sub>, HF, HCl, non-Hg HAP metals, or Hg emissions to demonstrate compliance with the limits in Table 2 to this subpart if you satisfy the requirements in paragraphs (d) through (j) of this section.

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- (d) For each existing EGU in the averaging group:
- (1) The emissions rate achieved during the initial performance test for the HAP being averaged must not exceed the emissions level that was being achieved 180 days after April 16, 2015, or the date on which emissions testing done to support your emissions averaging plan is complete (if the Administrator does not require submission and approval of your emissions averaging plan), or the date that you begin emissions averaging, whichever is earlier; or
  - (2) The control technology employed during the initial performance test must not be less than the design efficiency of the emissions control technology employed 180 days after April 16, 2015, or the date that you begin emissions averaging, whichever is earlier.
- (e) The weighted-average emissions rate from the existing EGUs participating in the emissions averaging option must be in compliance with the limits in Table 2 to this subpart at all times following the date that you begin emissions averaging.
- (f) Emissions averaging group eligibility demonstration. You must demonstrate the ability for the EGUs included in the emissions averaging group to demonstrate initial compliance according to paragraph (f)(1) or (2) of this section using the maximum rated heat input or gross output over a 30- (or 90-) boiler operating day period of each EGU and the results of the initial performance tests. For this demonstration and prior to preparing your emissions averaging plan, if requested, you must conduct required emissions monitoring for 30- (or 90 -) days of boiler operation and any required manual performance testing to calculate maximum weighted average emissions rate in accordance with this section. If, before the start of your initial compliance demonstration, the Administrator becomes aware that you intend to use emissions averaging for that demonstration or if your Notification of Compliance Status (NOCS) indicates that you intend to implement emissions averaging at a future date, the Administrator may require you to submit your proposed emissions averaging plan and supporting data for approval. If the Administrator requires approval of your plan, you may not begin using emissions averaging until the Administrator approves your plan.
- (1) You must use Equation 1a in paragraph (b) of this section to demonstrate that the maximum weighted average emissions rates of filterable PM, HF, SO<sub>2</sub>, HCl, non-Hg HAP metals, or Hg emissions from the existing units participating in the emissions averaging option do not exceed the emissions limits in Table 2 to this subpart.

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(2) If you are not capable of monitoring heat input or gross output, and the EGU generates steam for purposes other than generating electricity, you may use Equation 1b of paragraph (b) of this section as an alternative to using Equation 1a of paragraph (b) of this section to demonstrate that the maximum weighted average emissions rates of filterable PM, HF, SO<sub>2</sub>, HCl, non-Hg HAP metals, or Hg emissions from the existing units participating in the emissions averaging group do not exceed the emission limits in Table 2 to this subpart.

(g) You must determine the weighted average emissions rate in units of the applicable emissions limit on a 30-group boiler operating day rolling average basis (or, if applicable, on a 90-group boiler operating day rolling average for Hg) according to paragraphs (g)(1) and (2) of this section. The first averaging period begins on 30<sup>th</sup> (or, if applicable, 90<sup>th</sup> for the alternate Hg emission limit) group boiler operating day after the date that you begin emissions averaging.

(1) You must use Equation 2a or 3a of paragraph (b) of this section to calculate the weighted average emissions rate using the actual heat input or gross output for each existing unit participating in the emissions averaging option.

(2) If you are not capable of monitoring heat input or gross output, you may use Equation 2b or 3b of paragraph (b) of this section as an alternative to using Equation 2a of paragraph (b) of this section to calculate the average weighted emission rate using the actual steam generation from the units participating in the emissions averaging option.

(h) *CEMS (or sorbent trap monitoring) use.* If an EGU in your emissions averaging group uses CEMS (or a sorbent trap monitor for Hg emissions) to demonstrate compliance, you must use those data to determine the 30 (or 90) group boiler operating day rolling average emissions rate.

(i) *Emissions testing.* If you use manual emissions testing to demonstrate compliance for one or more EGUs in your emissions averaging group, you must use the results from the most recent performance test to determine the 30 (or 90) day rolling average. You may use CEMS or sorbent trap data in combination with data from the most recent manual performance test in calculating the 30 (or 90) group boiler operating day rolling average emissions rate.

(j) *Emissions averaging plan.* You must develop an implementation plan for emissions averaging according to the following procedures and requirements in paragraphs (j)(1) and (2) of this section.

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	<p>(1) You must include the information contained in paragraphs (j)(1)(i) through (v) of this section in your implementation plan for all the emissions units included in an emission averaging:</p> <ul style="list-style-type: none"> <li>(i) The identification of all existing EGUs in the emissions averaging group, including for each either the applicable HAP emission level or the control technology installed as of 180 days after February 16, 2015, or the date on which you complete the emissions measurements used to support your emissions averaging plan (if the Administrator does not require submission and approval of your emissions averaging plan), or the date that you begin emissions averaging, whichever is earlier; and the date on which you are requesting emissions averaging to commence;</li> <li>(ii) The process weighting parameter (heat input, gross output, or steam generated) that will be monitored for each averaging group;</li> <li>(iii) The specific control technology or pollution prevention measure to be used for each emission EGU in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple EGUs, you must identify each EGU;</li> <li>(iv) The means of measurement (e.g., CEMS, sorbent trap monitoring, manual performance test) of filterable PM, SO<sub>2</sub>, HF, HCl, individual or total non-Hg HAP metals, or Hg emissions in accordance with the requirements in §63.10007 and to be used in the emissions averaging calculations; and</li> <li>(v) A demonstration that emissions averaging can produce compliance with each of the applicable emission limit(s) in accordance with paragraph (b)(1) of this section.</li> </ul> <p>(2) If, as described in paragraph (f) of this section, the Administrator requests you to submit the plan for review and approval, you must receive approval before initiating emissions averaging.</p> <ul style="list-style-type: none"> <li>(i) The Administrator shall use following criteria in reviewing and approving or disapproving the plan:       <ul style="list-style-type: none"> <li>(A) Whether the content of the plan includes all of the information specified in paragraph (j)(1) of this section; and</li> <li>(B) Whether the plan presents information sufficient to determine that compliance will be achieved and maintained.</li> </ul> </li> <li>(ii) The Administrator shall not approve an emission averaging implementation plan containing any of the following provisions:       <ul style="list-style-type: none"> <li>(A) Any averaging between emissions of different pollutants or between units located at different facilities; or</li> <li>(B) The inclusion of any emissions unit other than an existing unit in the same subcategory.</li> </ul> </li> </ul> <p>(k) <i>Common stack requirements.</i> For a group of two or more existing affected units, each of which vents through a single common stack, you</p>
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	<p>may average emissions to demonstrate compliance with the limits in Table 2 to this subpart if you satisfy the requirements in paragraph (l) or (m) of this section.</p> <p>(l) For a group of two or more existing units in the same subcategory and which vent through a common emissions control system to a common stack that does not receive emissions from units in other subcategories or categories, you may treat such averaging group as a single existing unit for purposes of this subpart and comply with the requirements of this subpart as if the group were a single unit.</p> <p>(m) For all other groups of units subject to paragraph (k) of this section, you may elect to conduct manual performance tests according to procedures specified in §63.10007 in the common stack. If emissions from affected units included in the emissions averaging and from other units not included in the emissions averaging (e.g., in a different subcategory) or other nonaffected units all vent to the common stack, you must shut down the units not included in the emissions averaging and the nonaffected units or vent their emissions to a different stack during the performance test. Alternatively, you may conduct a performance test of the combined emissions in the common stack with all units operating and show that the combined emissions meet the most stringent emissions limit. You may also use a CEMS or sorbent trap monitoring to apply this latter alternative to demonstrate that the combined emissions comply with the most stringent emissions limit on a continuous basis.</p> <p>(n) Combination requirements. The common stack of a group of two or more existing EGUs in the same subcategory subject to paragraph (k) of this section may be treated as a single stack for purposes of paragraph (c) of this section and included in an emission averaging group subject to paragraph (c) of this section.”</p>
<b>13.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p><u>Control of HAPs Emissions</u>  <b><u>Testing and Initial Compliance Requirements</u></b>  <b><u>§63.10005 - What are my initial compliance requirements and by what date must I conduct them?</u></b></p> <p>(a) <u>General requirements.</u> For each of your affected EGUs, you must demonstrate initial compliance with each applicable emissions limit in Table 1 or 2 of this subpart through performance testing. Where two emissions limits are specified for a particular pollutant (e.g., a heat input-</p>

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based limit in lb./MMBtu and a gross output-based limit in lb./MWh), you may demonstrate compliance with either emission limit. For a particular compliance demonstration, you may be required to conduct one or more of the following activities in conjunction with performance testing: collection of data, e.g., hourly gross output data (megawatts); establishment of operating limits according to §63.10011 and Tables 4 and 7 to this subpart; and CMS performance evaluations. In all cases, you must demonstrate initial compliance no later than the date in paragraph (f) of this section for tune-up work practices for existing EGUs, in §63.9984 for other requirements for **existing** EGUs, and in paragraph (g) of this section for all requirements for new EGUs.

(1) To demonstrate initial compliance with an applicable emissions limit in Table 1 or 2 to this subpart using stack testing, the initial performance test generally consists of three runs at specified process operating conditions using approved methods. If you are required to establish operating limits (see paragraph (d) of this section and Table 4 to this subpart), you must collect all applicable parametric data during the performance test period. Also, if you choose to comply with an electrical output-based emission limit, you must collect hourly electrical load data during the test period.

(2) To demonstrate initial compliance using either a CMS that measures HAP concentrations directly (*i.e.*, an **Hg, HCl, or HF CEMS**, or a sorbent trap monitoring system) or an **SO<sub>2</sub> or PM CEMS**, the initial performance test consists of 30- or, for certain coal-fired existing EGUs that use emissions averaging for Hg, 90-boiler operating days. If the CMS is certified prior to the compliance date (or, if applicable, the approved extended compliance date), the test shall begin with the first operating day on or after that date, except as otherwise provided in paragraph (b) of this section. If the CMS is not certified prior to the compliance date, the test shall begin with the first operating day after certification testing is successfully completed. In all cases, the initial 30- or 90- operating day averaging period must be completed on or before the date that compliance must be demonstrated (*i.e.*, 180 days after the applicable compliance date).

(i) The CMS performance test must demonstrate compliance with the applicable Hg, HCl, HF, PM, or SO<sub>2</sub> emissions limit in Table 1 or 2 to this subpart.

(ii) You must collect hourly data from auxiliary monitoring systems (*i.e.*, stack gas flow rate, CO<sub>2</sub>, O<sub>2</sub>, or moisture, as applicable) during the performance test period, in order to convert the pollutant concentrations to units of the standard. If you choose to comply with an electrical output-based emission limit, you must also collect hourly gross output data during the performance test period.

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(iii) For a group of affected units that are in the same subcategory, are subject to the same emission standards, and share a common stack, if you elect to demonstrate compliance by monitoring emissions at the common stack, startup, and shutdown emissions (if any) that occur during the 30-(or, if applicable, 90-) boiler operating day performance test must either be excluded from or included in the compliance demonstration as follows:

(A) If one of the units that shares the stack either starts up or shuts down at a time when none of the other units is operating, you must exclude all pollutant emission rates measured during the startup or shutdown period, unless you are using a sorbent trap monitoring system to measure Hg emissions and have elected to include startup and shutdown emissions in the compliance demonstrations;

(B) If all units that are currently operating are in the startup or shutdown mode, you must exclude all pollutant emission rates measured during the startup or shutdown period, unless you are using a sorbent trap monitoring system to measure Hg emissions and have elected to include startup and shutdown emissions in the compliance demonstrations; or

(C) If any unit starts up or shuts down at a time when another unit is operating, and the other unit is not in the startup or shutdown mode, you must include all pollutant emission rates measured during the startup or shutdown period in the compliance demonstrations.”

“(b) Performance testing requirements. If you choose to use performance testing to demonstrate initial compliance with the applicable emissions limits in Tables 1 and 2 to this subpart for your EGUs, you must conduct the tests according to §63.10007 and Table 5 to this subpart. For the purposes of the initial compliance demonstration, you may use test data and results from a performance test conducted prior to the date on which compliance is required as specified in §63.9984, provided that the following conditions are fully met:

- (1) For a performance test based on stack test data, the test was conducted no more than 12 calendar months prior to the date on which compliance is required as specified in §63.9984;
- (2) For a performance test based on data from a certified CEMS or sorbent trap monitoring system, the test consists of all valid CMS data recorded in the 30 boiler operating days immediately preceding that date;
- (3) The performance test was conducted in accordance with all applicable requirements in §63.10007 and Table 5 to this subpart;
- (4) A record of all parameters needed to convert pollutant concentrations to units of the emission standard (e.g., stack flow rate, diluent gas

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concentrations, hourly gross outputs) is available for the entire performance test period; and

(5) For each performance test based on stack test data, you certify, and keep documentation demonstrating, that the EGU configuration, control devices, and fuel(s) have remained consistent with conditions since the prior performance test was conducted.”

(c) *Not Applicable.*

(d) CMS requirements. If, for a particular emission or operating limit, you are required to (or elect to) demonstrate initial compliance using a continuous monitoring system, the CMS must pass a performance evaluation prior to the initial compliance demonstration. If a CMS has been previously certified under another state or federal program and is continuing to meet the on-going quality-assurance (QA) requirements of that program, then, provided that the certification and QA provisions of that program meet the applicable requirements of §§63.10010(b) through (h), an additional performance evaluation of the CMS is not required under this subpart.

(1) For an affected **coal-fired**, solid oil-derived fuel-fired, or liquid oil-fired EGU, you may demonstrate initial compliance with the applicable SO<sub>2</sub>, HCl, or HF emissions limit in Table 1 or 2 to this subpart through use of an SO<sub>2</sub>, HCl, or HF CEMS installed and operated in accordance with part 75 of this chapter or Appendix B to this subpart, as applicable. You may also demonstrate compliance with a filterable PM emission limit in Table 1 or 2 to this subpart through use of a **PM CEMS** installed, certified, and operated in accordance with §63.10010(i). Initial compliance is achieved if the arithmetic average of 30-boiler operating days of quality-assured CEMS data, expressed in units of the standard (see §63.10007(e)), meets the applicable SO<sub>2</sub>, PM, HCl, or HF emissions limit in Table 1 or 2 to this subpart. Use Equation 19-19 of Method 19 in appendix A-7 to part 60 of this chapter to calculate the 30-boiler operating day average emissions rate. (NOTE: For this calculation, the term E<sub>hj</sub> in Equation 19-19 must be in the same units of measure as the applicable HCl or HF emission limit in Table 1 or 2 to this subpart).

(2) *Not Applicable.*

(3) For affected EGUs that are either required to or elect to demonstrate initial compliance with the applicable Hg emission limit in Table 1 or 2 of this subpart using **Hg CEMS** or sorbent trap monitoring systems, initial compliance must be demonstrated no later than the applicable date specified in §63.9984(f) for existing EGUs and in paragraph (g) of this section for new EGUs. Initial compliance is achieved if the arithmetic average of 30- (or 90-) boiler operating days of quality-assured CEMS (or



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sorbent trap monitoring system) data, expressed in units of the standard (see section 6.2 of appendix A to this subpart), meets the applicable Hg emission limit in Table 1 or 2 to this subpart.”

“(e) *Tune-ups*. All affected EGUs are subject to the work practice standards in Table 3 of this subpart. As part of your initial compliance demonstration, you must conduct a performance tune-up of your EGU according to §63.10021(e).

“(f) For an existing EGU without a neural network, a tune-up, following the procedures in §63.10021(e), must occur within 6 months (180 days) after April 16, 2015. For an existing EGU with a neural network, a tune-up must occur within 18 months (545 days) after April 16, 2016. If a tune-up occurs prior to April 16, 2015, you must keep records showing that the tune-up met all rule requirements.”

(g) *Not Applicable.*

(h) *Not Applicable.*

(i) *Not Applicable.*

“(j) Startup and shutdown for coal-fired or solid oil derived-fired units. You must follow the requirements given in Table 3 to this subpart.

(k) You must submit a Notification of Compliance Status summarizing the results of your initial compliance demonstration, as provided in §63.10030.”

**§63.10006 - When must I conduct subsequent performance tests or tune-ups?**

“(a) *Not Applicable.*

“(b) *Not Applicable.*”

“(c) Except where paragraphs (a) or (b) of this section apply, or where you install, certify, and operate a PM CEMS to demonstrate compliance with a filterable PM emissions limit, for liquid oil-, solid oil-derived fuel-, **coal-fired** and IGCC EGUs, you must conduct all applicable periodic emissions tests for filterable PM, individual, or total HAP metals emissions according to Table 5 to this subpart, §63.10007, and §63.10000(c), except as otherwise provided in §63.10021(d)(1).”

“(d) *Not Applicable.*

“(e) *Not Applicable.*

“(f) Time between performance tests.

(1) Notwithstanding the provisions of §63.10021(d)(1), the requirements listed in paragraphs (g) and (h) of this section, and the requirements of paragraph (f)(3) of this section, you must complete performance tests for your EGU as follows:

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	<p>(i) At least 45 calendar days, measured from the test's end date, must separate performance tests conducted every quarter;</p> <p>(ii) For annual testing:</p> <p>(A) At least 320 calendar days, measured from the test's end date, must separate performance tests;</p> <p>(B) At least 320 calendar days, measured from the test's end date, must separate annual sorbent trap mercury testing for 30-boiler operating day LEE tests;</p> <p>(C) At least 230 calendar days, measured from the test's end date, must separate annual sorbent trap mercury testing for 90-boiler operating day LEE tests; and</p> <p>(iii) At least 1,050 calendar days, measured from the test's end date, must separate performance tests conducted every 3 years.</p> <p>(2) For units demonstrating compliance through quarterly emission testing, you must conduct a performance test in the 4th quarter of a calendar year if your EGU has skipped performance tests in the first 3 quarters of the calendar year.</p> <p>(3) If your EGU misses a performance test deadline due to being inoperative and if 168 or more boiler operating hours occur in the next test period, you must complete an additional performance test in that period as follows:</p> <p>(i) At least 15 calendar days must separate two performance tests conducted in the same quarter.</p> <p>(ii) At least 107 calendar days must separate two performance tests conducted in the same calendar year.</p> <p>(iii) At least 350 calendar days must separate two performance tests conducted in the same 3-year period.</p> <p>“(g) <i>Not Applicable.</i></p> <p>“(h) <i>Not Applicable.</i></p> <p>“(i) If you are required to meet an applicable tune-up work practice standard, you must conduct a performance tune-up according to §63.10021(e).</p> <p>(1) For EGUs not employing neural network combustion optimization during normal operation, each performance tune-up specified in §63.10021(e) must be no more than 36 calendar months after the previous performance tune-up.</p> <p>(2) For EGUs employing neural network combustion optimization systems during normal operation, each performance tune-up specified in §63.10021(e) must be no more than 48 calendar months after the previous performance tune-up.”</p> <p>“(j) You must report the results of performance tests and performance tune-ups within 60 days after the completion of the performance tests and</p>
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performance tune-ups. The reports for all subsequent performance tests must include all applicable information required in §63.10031.”

**Table 5 to Subpart UUUUU of Part 63—Performance Testing Requirements**

As stated in §63.10007, you must comply with the following requirements for performance testing for existing, new, or reconstructed affected sources:<sup>1</sup>

To conduct a performance test for the following pollutant	Using	You must perform the following activities, as applicable to your input- or output-based emission limit	Using <sup>2</sup>
1. Filterable Particulate matter (PM)	PM CEMS	a. Install, certify, operate, and maintain the PM CEMS	Performance Specification 11 at Appendix B to part 60 of this chapter and Procedure 2 at Appendix F to Part 60 of this chapter.
		b. Install, certify, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems	Part 75 of this chapter and §§63.10010(a), (b), (c), and (d).
		c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb./MMBtu or lb./MWh emissions rates	Method 19 F-factor methodology at Appendix A-7 to part 60 of this chapter or calculate using mass emissions rate and gross output data (see §63.10007(e)).
3. Hydrogen chloride (HCl) and hydrogen fluoride (HF)	HCl and/or HF CEMS	a. Install, certify, operate, and maintain the HCl or HF CEMS	Appendix B of this subpart.
		b. Install, certify, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems	Part 75 of this chapter and §§63.10010(a), (b), (c), and (d).
		c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb./MMBtu or lb./MWh emissions rates	Method 19 F-factor methodology at Appendix A-7 to part 60 of this chapter or calculate using mass emissions rate and gross output data (see §63.10007(e)).
4. Mercury (Hg)	Hg CEMS	a. Install, certify, operate, and maintain the CEMS	Sections 3.2.1 and 5.1 of Appendix A of this subpart.

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		b. Install, certify, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems	Part 75 of this chapter and §§63.10010(a), (b), (c), and (d).
		c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb./Tbtu or lb./GWh emissions rates	Section 6 of Appendix A to this subpart.

<sup>1</sup>Regarding emissions data collected during periods of startup or shutdown, see §§63.10020(b) and (c) and §63.10021(h).

<sup>2</sup>See Tables 1 and 2 to this subpart for required sample volumes and/or sampling run times.

<sup>3</sup>Incorporated by reference, see §63.14.

<sup>4</sup>When using ASTM D6348-03, the following conditions must be met: (1) The test plan preparation and implementation in the Annexes to ASTM D6348-03, Sections A1 through A8 are mandatory; (2) For ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent (%)R must be determined for each target analyte (see Equation A5.5); (3) For the ASTM D6348-03 test data to be acceptable for a target analyte, %R must be 70% ≤R ≤130%; and (4) The %R value for each compound must be reported in the test report and all field measurements corrected with the calculated %R value for that compound using the following equation:

$$\text{Reported Result} = \frac{(\text{Measured Concentration in Stack})}{\%R} \times 100$$

**§63.10007 - What methods and other procedures must I use for the performance tests?**

“(a) Except as otherwise provided in this section, you must conduct all required performance tests according to §63.7(d), (e), (f), and (h). You must also develop a site-specific test plan according to the requirements in §63.7(c).

(1) If you use **CEMS (Hg, HCl, SO<sub>2</sub>, or other)** to determine compliance with a 30- (or, if applicable, 90-) boiler operating day rolling average emission limit, you must collect quality- assured CEMS data for all unit operating conditions, including startup and shutdown (see §63.10011(g) and Table 3 to this subpart), except as otherwise provided in §63.10020(b). Emission rates determined during startup periods and shutdown periods (as defined in §63.10042) are not to be included in the compliance determinations, except as otherwise provided in §§63.10000(c)(1)(vi)(B) and 63.10005(a)(2)(iii).

(2) If you conduct performance testing with test methods in lieu of continuous monitoring, operate the unit at maximum normal operating load conditions during each periodic (e.g., quarterly) performance test. Maximum normal operating load will be generally between 90 and 110 percent of design capacity but should be representative of site-specific normal operations during each test run.

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	<p>(3) <i>Not Applicable.</i></p> <p>“(b) You must conduct each performance test (including traditional 3-run stack tests, 30-boiler operating day tests based on CEMS data (or sorbent trap monitoring system data), and 30-boiler operating day Hg emission tests for LEE qualification) according to the requirements in Table 5 to this subpart.”</p> <p>(c) <i>Not Applicable.</i></p> <p>“(d) Except for a 30-boiler operating day performance test based on CEMS (or sorbent trap monitoring system) data, where the concept of test runs does not apply, you must conduct a minimum of three separate test runs for each performance test, as specified in §63.7(e)(3). Each test run must comply with the minimum applicable sampling time or volume specified in Table 1 or 2 to this subpart. Sections 63.10005(d) and (h), respectively, provide special instructions for conducting performance tests based on CEMS or sorbent trap monitoring systems, and for conducting emission tests for LEE qualification.”</p> <p>“(e) To use the results of performance testing to determine compliance with the applicable emission limits in Table 1 or 2 to this subpart, proceed as follows:</p> <p>(1) Except for a 30-boiler operating day performance test based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), you must use the method detection level as the measured emissions level for that pollutant in calculating compliance. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 29 fractions both for individual HAP metals and for total HAP metals) may include a combination of method detection level data and analytical data reported above the method detection level.</p> <p>(2) If the limits are expressed in lb./MMBtu or lb./TBtu, you must use the F-factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 in appendix A-7 to part 60 of this chapter. In cases where an appropriate F-factor is not listed in Table 19-2 of Method 19, you may use F-factors from Table 1 in section 3.3.5 of appendix F to part 75 of this chapter, or F-factors derived using the procedures in section 3.3.6 of appendix to part 75 of this chapter. Use the following factors to convert the pollutant concentrations measured during the initial performance tests to units of lb./scf, for use in the applicable Method 19 equations:</p> <p>(i) Multiply SO<sub>2</sub> ppm by <math>1.66 \times 10^{-7}</math>;</p>

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(ii) Multiply HCl ppm by  $9.43 \times 10^{-8}$ ;  
 (iii) Multiply HF ppm by  $5.18 \times 10^{-8}$ ;  
 (iv) Multiply HAP metals concentrations (mg/dscm) by  $6.24 \times 10^{-8}$ ; and  
 (v) Multiply Hg concentrations ( $\mu\text{g}/\text{scm}$ ) by  $6.24 \times 10^{-11}$ .  
 (3) To determine compliance with emission limits expressed in lb./MWh or lb./GWh, you must first calculate the pollutant mass emission rate during the performance test, in units of lb./h. For Hg, if a CEMS or sorbent trap monitoring system is used, use Equation A-2 or A-3 in appendix A to this subpart (as applicable). In all other cases, use an equation that has the general form of Equation A-2 or A-3, replacing the value of K with  $1.66 \times 10^{-7}$  lb./scf-ppm for SO<sub>2</sub>,  $9.43 \times 10^{-8}$  lb./scf-ppm for HCl (if an HCl CEMS is used),  $5.18 \times 10^{-8}$  lb./scf-ppm for HF (if an HF CEMS is used), or  $6.24 \times 10^{-8}$  lb.-scm/mg-scf for HAP metals and for HCl and HF (when performance stack testing is used), and defining C<sub>h</sub> as the average SO<sub>2</sub>, HCl, or HF concentration in ppm, or the average HAP metals concentration in mg/dscm. This calculation requires stack gas volumetric flow rate (scfh) and (in some cases) moisture content data (see §§63.10005(h)(3) and 63.10010). Then, if the applicable emission limit is in units of lb./GWh, use Equation A-4 in appendix A to this subpart to calculate the pollutant emission rate in lb./GWh. In this calculation, define (M)<sub>h</sub> as the calculated pollutant mass emission rate for the performance test (lb./h), and define (MW)<sub>h</sub> as the average electrical load during the performance test (megawatts). If the applicable emission limit is in lb./MWh rather than lb./GWh, omit the 10<sup>3</sup> term from Equation A-4 to determine the pollutant emission rate in lb./MWh.”

“(f) If you elect to (or are required to) use CEMS to continuously monitor Hg, HCl, HF, SO<sub>2</sub>, or PM emissions (or, if applicable, sorbent trap monitoring systems to continuously collect Hg emissions data), the following default values are available for use in the emission rate calculations during startup periods or shutdown periods (as defined in §63.10042). For the purposes of this subpart, these default values are not considered to be substitute data.

(1) *Diluent cap values.* If you use CEMS (or, if applicable, sorbent trap monitoring systems) to comply with a heat input-based emission rate limit, you may use the following diluent cap values for a startup or shutdown hour in which the measured CO<sub>2</sub> concentration is below the cap value or the measured O<sub>2</sub> concentration is above the cap value:

- (i) For an IGCC EGU, you may use 1% for CO<sub>2</sub> or 19% for O<sub>2</sub>.
- (ii) For all other EGUs, you may use 5% for CO<sub>2</sub> or 14% for O<sub>2</sub>.

(2) *Default gross output.* If you use CEMS to continuously monitor Hg, HCl, HF, SO<sub>2</sub>, or PM emissions (or, if applicable, sorbent trap monitoring

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	<p>systems to continuously collect Hg emissions data), the following default value is available for use in the emission rate calculations during startup periods or shutdown periods (as defined in §63.10042). For the purposes of this subpart, this default value is not considered to be substitute data. For a startup or shutdown hour in which there is heat input to an affected EGU but zero gross output, you must calculate the pollutant emission rate using a value equivalent to 5% of the maximum sustainable gross output, expressed in megawatts, as defined in section 6.5.2.1(a)(1) of Appendix A to part 75 of this chapter. This default gross output is either the nameplate capacity of the EGU or the highest gross output observed in at least four representative quarters of EGU operation. For a monitored common stack, the default gross output is used only when all EGUs are operating (i.e., combusting fuel) are in startup or shutdown mode, and have zero electrical generation. Under those conditions, a default electrical load equal to 5% of the combined maximum sustainable gross output of the EGUs that are operating but have a total of zero gross output must be used to calculate the hourly gross output-based pollutant emissions rate.”</p> <p>“(g) Upon request, you shall make available to the EPA Administrator such records as may be necessary to determine whether the performance tests have been done according to the requirements of this section.”</p>
<b>13.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p><u>Control of HAPs Emissions</u>  <b>§63.10010 - What are my monitoring, installation, operation, and maintenance requirements?</b></p> <p>“(a) Flue gases from the affected units under this subpart exhaust to the atmosphere through a variety of different configurations, including but not limited to individual stacks, a common stack configuration or a main stack plus a bypass stack. For the <b>CEMS</b>, PM CPMS, and sorbent trap monitoring systems used to provide data under this subpart, the continuous monitoring system installation requirements for these exhaust configurations are as follows:</p> <p>(1) Single unit-single stack configurations. For an affected unit that exhausts to the atmosphere through a single, dedicated stack, you shall either install the required CEMS, PM CPMS, and sorbent trap monitoring systems in the stack or at a location in the ductwork downstream of all emissions control devices, where the pollutant and diluents concentrations are representative of the emissions that exit to the atmosphere.</p>

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	<p>(2) Unit utilizing common stack with other affected unit(s). When an affected unit utilizes a common stack with one or more other affected units, but no non-affected units, you shall either:</p> <ul style="list-style-type: none"> <li>(i) Install the required CEMS, PM CPMS, and sorbent trap monitoring systems in the duct leading to the common stack from each unit; or</li> <li>(ii) Install the required CEMS, PM CPMS, and sorbent trap monitoring systems in the common stack.”</li> </ul> <p>“(4) Unit with a main stack and a bypass stack that exhausts to the atmosphere independent of the main stack. If the exhaust configuration of an affected unit consists of a main stack and a bypass stack, you shall install CEMS on both the main stack and the bypass stack. If it is not feasible to certify and quality-assure the data from a monitoring system on the bypass stack, you shall:</p> <ul style="list-style-type: none"> <li>(i) Route the exhaust from the bypass through the main stack and its monitoring so that bypass emissions are measured; or</li> <li>(ii) Install a CEMS only on the main stack and count hours that the bypass stack is in use as hours of deviation from monitoring requirements.</li> </ul> <p>“(b) If you use an oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) CEMS to convert measured pollutant concentrations to the units of the applicable emissions limit, the O<sub>2</sub> or CO<sub>2</sub> concentrations shall be monitored at a location that represents emissions to the atmosphere, <i>i.e.</i>, at the outlet of the EGU, downstream of all emission control devices. You must install, certify, maintain, and operate the CEMS according to part 75 of this chapter. Use only quality assured O<sub>2</sub> or CO<sub>2</sub> data in the emissions calculations; do not use part 75 substitute data values.</p> <p>(c) If you are required to use a stack gas flow rate monitor, either for routine operation of a sorbent trap monitoring system or to convert pollutant concentrations to units of an electrical output-based emission standard in Table 1 or 2 to this subpart, you must install, certify, operate, and maintain the monitoring system and conduct on-going quality-assurance testing of the system according to part 75 of this chapter. Use only unadjusted, quality-assured flow rate data in the emissions calculations. Do not apply bias adjustment factors to the flow rate data and do not use substitute flow rate data in the calculations.</p> <p>(d) If you are required to make corrections for stack gas moisture content when converting pollutant concentrations to the units of an emission standard in Table 1 of 2 to this subpart, you must install, certify, operate, and maintain a moisture monitoring system in accordance with part 75 of this chapter. Alternatively, for coal-fired units, you may use appropriate fuel-specific default moisture values from §75.11(b) of this chapter to estimate the moisture content of the stack gas or you may petition the Administrator under §75.66 of this chapter for use of a default moisture</p>
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value for non-coal-fired units. If you install and operate a moisture monitoring system, do not use substitute moisture data in the emissions calculations.

(e) If you use an HCl and/or HF CEMS, you must install, certify, operate, maintain, and quality-assure the data from the monitoring system in accordance with appendix B to this subpart. Calculate and record a 30-boiler operating day rolling average HCl or HF emission rate in the units of the standard, updated after each new boiler operating day. Each 30-boiler operating day rolling average emission rate is the average of all the valid hourly HCl or HF emission rates in the preceding 30 boiler operating days (see section 9.4 of appendix B to this subpart).

(f)(1) If you use an SO<sub>2</sub> CEMS, you must install the monitor at the outlet of the EGU, downstream of all emission control devices, and you must certify, operate, and maintain the CEMS according to part 75 of this chapter.

(2) For on-going QA, the SO<sub>2</sub> CEMS must meet the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: You must perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the SO<sub>2</sub> CEMS has a span value of 30 ppm or less.

(3) Calculate and record a 30-boiler operating day rolling average SO<sub>2</sub> emission rate in the units of the standard, updated after each new boiler operating day. Each 30-boiler operating day rolling average emission rate is the average of all of the valid SO<sub>2</sub> emission rates in the 30-boiler operating day period.

(4) Use only unadjusted, quality assured SO<sub>2</sub> concentration values in the emissions calculations; do not apply bias adjustment factors to the part 75 SO<sub>2</sub> data and do not use part 75 substitute data values. For startup or shutdown hours (as defined in §63.10042) the default gross output and the diluent cap are available for use in the hourly SO<sub>2</sub> emission rate calculations, as described in §63.10007(f). Use a flag to identify each startup or shutdown hour and report a special code if the diluent cap or default gross output is used to calculate the SO<sub>2</sub> emission rate for any of these hours.

(g) If you use a Hg CEMS or a sorbent trap monitoring system, you must install, certify, operate, maintain, and quality-assure the data from the monitoring system in accordance with appendix A to this subpart. You must calculate and record a 30- (or, if alternate emissions averaging is used, 90-) boiler operating day rolling average Hg emission rate, in units of the standard, updated after each new boiler operating day. Each 30- (or, if alternate emissions averaging is used, 90-) boiler operating day

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	<p>rolling average emission rate, calculated according to section 6.2 of appendix A to the subpart, is the average of all of the valid hourly Hg emission rates in the preceding 30- (or, if alternate emissions averaging is used, 90-) boiler operating days. Section 7.1.4.3 of appendix A to this subpart explains how to reduce sorbent trap monitoring system data to an hourly basis.</p> <p>(h) <i>Not Applicable.</i></p> <p>(i) If you choose to comply with the PM filterable emissions limit in lieu of metal HAP limits, you may choose to install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (i)(1) through (5) of this section. The compliance limit will be expressed as a 30-boiler operating day rolling average of the numerical emissions limit value applicable for your unit in tables 1 or 2 to this subpart.</p> <p>(1) Install and certify your PM CEMS according to the procedures and requirements in Performance Specification 11—Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to part 60 of this chapter, using Method 5 at Appendix A-3 to part 60 of this chapter and ensuring that the front half filter temperature shall be <math>160^{\circ} \pm 14^{\circ} \text{C}</math> (<math>320^{\circ} \pm 25^{\circ} \text{F}</math>). The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb./MMBtu, lb./MWh). Note: Under the General Provisions §63.8(f)(6)(ii), the Permittee may petition the EPA to use an alternate relative accuracy test for the PM CEMS. The Permittee may want to match the relative accuracy testing with the RA testing requirement for PM CEMS to satisfy NSPS subpart Da.</p> <p>(2) Operate and maintain your PM CEMS according to the procedures and requirements in Procedure 2—Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to part 60 of this chapter.</p> <p>(i) You must conduct the relative response audit (RRA) for your PM CEMS at least once annually.</p> <p>(ii) You must conduct the relative correlation audit (RCA) for your PM CEMS at least once every 3 years.</p> <p>(3) Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (i) of this section.</p> <p>(4) Calculate the arithmetic 30-boiler operating day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler operating hours.</p> <p>(5) You must collect data using the PM CEMS at all times the process unit is operating and at the intervals specified in paragraph (a) of this section,</p>
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	<p>except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.</p> <p>(i) You must use all the data collected during all boiler operating hours in assessing the compliance with your operating limit except:</p> <p>(A) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities that temporarily interrupt the measurement of emissions (e.g., calibrations, certain audits). You must report any monitoring system malfunctions or out of control periods in your annual deviation reports. You must report any monitoring quality assurance or quality control activities per the requirements of §63.10031(b);</p> <p>(B) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control or required monitoring system quality assurance or control activities conducted during out-of-control periods. You must report any such periods in your annual deviation report;</p> <p>(C) Any data recorded during periods of startup or shutdown.</p> <p>(ii) You must record and make available upon request results of PM CEMS system performance audits, dates, and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with your site-specific monitoring plan.</p> <p>(j) You may choose to comply with the metal HAP emissions limits using CEMS approved in accordance with §63.7(f) as an alternative to the performance test method specified in this rule. If approved to use a HAP metals CEMS, the compliance limit will be expressed as a 30-boiler operating day rolling average of the numerical emissions limit value applicable for your unit in tables 1 or 2. If approved, you may choose to install, certify, operate, and maintain a HAP metals CEMS and record the output of the HAP metals CEMS as specified in paragraphs (j)(1) through (5) of this section.</p> <p>(1)(i) Install, calibrate, operate, and maintain your HAP metals CEMS according to your CMS quality control program, as described in §63.8(d)(2). The reportable measurement output from the HAP metals CEMS must be expressed in units of the applicable emissions limit (e.g., lb./MMBtu, lb./MWh) and in the form of a 30-boiler operating day rolling average.</p>
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(ii) Operate and maintain your HAP metals CEMS according to the procedures and criteria in your site-specific performance evaluation and quality control program plan required in §63.8(d).

(2) Collect HAP metals CEMS hourly average output data for all boiler operating hours except as indicated in section (j)(4) of this section.

(3) Calculate the arithmetic 30-boiler operating day rolling average of all of the hourly average HAP metals CEMS output data collected during all nonexempt boiler operating hours data.

(4) You must collect data using the HAP metals CEMS at all times the process unit is operating and at the intervals specified in paragraph (a) of this section, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.

(i) You must use all the data collected during all boiler operating hours in assessing the compliance with your emission limit except:

(A) Any data collected during periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities that temporarily interrupt the measurement of emissions (e.g., calibrations, certain audits). You must report any monitoring system malfunctions or out of control periods in your annual deviation reports. You must report any monitoring system quality assurance or quality control activities per the requirements of §63.10031(b).

(B) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control or required monitoring system quality assurance or quality control activities conducted during out-of-control periods. You must report any monitoring system malfunctions or out of control periods in your annual deviation reports. You must report any monitoring system quality assurance or quality control activities per the requirements of §63.10031(b).

(C) Any data recorded during periods of startup or shutdown.

(ii) You must record and make available upon request results of HAP metals CEMS system performance audits, dates, and duration of periods when the HAP metals CEMS is out of control to completion of the corrective actions necessary to return the HAP metals CEMS to operation consistent with your site-specific performance evaluation and quality control program plan.”

**§63.10011** - How do I demonstrate initial compliance with the emissions limits and work practice standards?

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(a) You must demonstrate initial compliance with each emissions limit that applies to you by conducting performance testing.

(b) If you are subject to an operating limit in Table 4 to this subpart, you demonstrate initial compliance with HAP metals or filterable PM emission limit(s) through performance stack tests and you elect to use a PM CPMS to demonstrate continuous performance, or if, for a liquid oil-fired unit, and you use quarterly stack testing for HCl and HF plus site-specific parameter monitoring to demonstrate continuous performance, you must also establish a site-specific operating limit, in accordance with §63.10007, and Table 6 to this subpart. You may use only the parametric data recorded during successful performance tests (*i.e.*, tests that demonstrate compliance with the applicable emissions limits) to establish an operating limit.

(c)(1) If you use **CEMS** or sorbent trap monitoring systems to measure a HAP (e.g., Hg or HCl) directly, the initial performance test, shall consist of a 30-boiler operating day (or, for certain coal-fired, existing EGUs that use emissions averaging for Hg, a 90- boiler operating day) rolling average emissions rate obtained with a certified CEMS or sorbent trap system, expressed in units of the standard. If the monitoring system is certified prior to the applicable compliance date, the initial averaging period shall either begin with: The first boiler operating day on or after the compliance date; or 30 (or, if applicable, 90) boiler operating days prior to that date, as described in §63.10005(b). In all cases, the initial 30- or 90- boiler operating day averaging period must be completed on or before the date that compliance must be demonstrated, in accordance with §63.9984(f). Initial compliance is demonstrated if the results of the performance test meet the applicable emission limit in Table 1 or 2 to this subpart.

(2) For an EGU that uses a **CEMS to measure SO<sub>2</sub>** or **PM** emissions for initial compliance, the initial performance test shall consist of a 30-boiler operating day average emission rate obtained with certified CEMS, expressed in units of the standard. If the monitoring system is certified prior to the applicable compliance date, the initial averaging period shall either begin with: The first boiler operating day on or after the compliance date; or 30 boiler operating days prior to that date, as described in §63.10005(b). In all cases, the initial 30-boiler operating day averaging period must be completed on or before the date that compliance must be demonstrated, in accordance with §63.9984(f). Initial compliance is demonstrated if the results of the performance test meet the applicable SO<sub>2</sub> or PM emission limit in Table 1 or 2 of this subpart.

“(e) You must submit a Notification of Compliance Status containing the results of the initial compliance demonstration, in accordance with §63.10030(e).

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	<p>(f)(1) You must determine the fuel whose combustion produces the least uncontrolled emissions, i.e., the cleanest fuel, either natural gas or distillate oil, that is available on site or accessible nearby for use during periods of startup or shutdown.</p> <p>(2) Your cleanest fuel, either natural gas or distillate oil, for use during periods of startup or shutdown determination may take safety considerations into account.</p> <p>(g) You must follow the startup or shutdown requirements as established in Table 3 to this subpart for each coal-fired, liquid oil-fired, or solid oil-derived fuel-fired EGU.</p> <p>(1) You may use the diluent cap and default gross output values, as described in §63.10007(f), during startup periods or shutdown periods.</p> <p>(2) You must operate all CMS, collect data, calculate pollutant emission rates, and record data during startup periods or shutdown periods.</p> <p>(3) You must report the information as required in §63.10031.</p> <p>(4) If you choose to use paragraph (2) of the definition of “startup” in §63.10042 and you find that you are unable to safely engage and operate your particulate matter (PM) control(s) within 1 hour of first firing of coal, residual oil, or solid oil-derived fuel, you may choose to rely on paragraph (1) of definition of “startup” in §63.10042 or you may submit a request to use an alternative non-opacity emissions standard, as described below.</p> <p>(i) As mentioned in §63.6(g)(1), the request will be published in the FEDERAL REGISTER for notice and comment rulemaking. Until promulgation in the FEDERAL REGISTER of the final alternative non-opacity emission standard, you shall comply with paragraph (1) of the definition of “startup” in §63.10042. You shall not implement the alternative non-opacity emissions standard until promulgation in the FEDERAL REGISTER of the final alternative non-opacity emission standard.</p> <p>(ii) Your request need not address the items contained in §63.6(g)(2).</p> <p>(iii) Your request shall provide evidence of a documented manufacturer-identified safety issue.</p> <p>(iv) Your request shall provide information to document that the PM control device is adequately designed and sized to meet the PM emission limit applicable to the EGU.</p> <p>(v) In addition, your request shall contain documentation that:</p> <p>(A) Your EGU is using clean fuels to the maximum extent possible, taking into account considerations such as not compromising boiler or control device integrity, to bring your EGU and PM control device up to the temperature necessary to alleviate or prevent the identified safety issues prior to the combustion of primary fuel in the EGU;</p> <p>(B) You have followed explicitly your manufacturer's procedures to alleviate or prevent the identified safety issue; and</p>
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(C) You have identified with specificity the details of your EGU manufacturer’s statement of concern.  
(vi) Your request shall specify the other work practice standards you will take to limit HAP emissions during startup periods and shutdown periods to ensure a control level consistent with the work practice standards of the final rule.  
(vii) You must comply with all other work practice requirements, including but not limited to data collection, recordkeeping, and reporting requirements.”

Continuous Compliance Requirements

**§63.10020 - How do I monitor and collect data to demonstrate continuous compliance?**

“(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by §63.10000(d).

(b) You must operate the monitoring system and collect data at all required intervals at all times that the affected EGU is operating, except for periods of monitoring system malfunctions or out-of-control periods (see §63.8(c)(7) of this part) and required monitoring system quality assurance or quality control activities, including, as applicable, calibration checks and required zero and span adjustments. You are required to affect monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.

(c) You may not use data recorded during EGU startup or shutdown or monitoring system malfunctions or monitoring system out-of-control periods, repairs associated with monitoring system malfunctions or monitoring system out-of-control periods or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

(d) Except for periods of monitoring system malfunctions or monitoring system out-of-control periods, repairs associated with monitoring system malfunctions or monitoring system out-of-control periods and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments), failure to collect required data is a deviation from the monitoring requirements.

(e) Additional requirements during startup periods or shutdown periods if you choose to rely on paragraph (2) of the definition of “startup” in §63.10042 for your EGU.

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(1) During each period of startup, you must record for each EGU:

- (i) The date and time that clean fuels being combusted for the purpose of startup begins;
- (ii) The quantity and heat input of clean fuel for each hour of startup;
- (iii) The gross output for each hour of startup;
- (iv) The date and time that non-clean fuel combustion begins; and
- (v) The date and time that clean fuels being combusted for the purpose of startup ends.

(2) During each period of shutdown, you must record for each EGU:

- (i) The date and time that clean fuels being combusted for the purpose of shutdown begins;
- (ii) The quantity and heat input of clean fuel for each hour of shutdown;
- (iii) The gross output for each hour of shutdown;
- (iv) The date and time that non-clean fuel combustion ends; and
- (v) The date and time that clean fuels being combusted for the purpose of shutdown ends.

(3) For PM or non-mercury HAP metals work practice monitoring during startup periods, you must monitor and collect data according to this section and the site-specific monitoring plan required by §63.100104(l).

- (i) Except for an EGU that uses **PM CEMS** or PM CPMS to demonstrate compliance with the PM emissions limit or that has LEE status for filterable PM or total non-Hg HAP metals for non-liquid oil-fired EGUs (or HAP metals emissions for liquid oil-fired EGUs), or individual non-mercury metals CEMS you must:
  - (A) Record temperature and combustion flow or calculated flow as determined from combustion equations of post-combustion (exhaust) gas, as well as amperage of any induced draft fan(s), downstream of the filterable PM control device during each hour of startup.
  - (B) Record temperature and flow of exhaust gas and amperage of induced draft fan(s) downstream of each filterable PM control devices during each hour of startup.
  - (C) *Not Applicable.*
  - (D) *Not Applicable.*
  - (E) For an EGU with a wet scrubber needed for filterable PM control, record the scrubber liquid to flue gas ratio and the pressure drop across the scrubber during each hour of startup.”

**§63.10021 - How do I demonstrate continuous compliance with the emission limitations, operating limits, and work practice standards?**

“(a) You must demonstrate continuous compliance with each emissions limit, operating limit, and work practice standard in Tables 1 through 4 to this subpart that applies to you, according to the monitoring specified in



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Tables 6 and 7 to this subpart and paragraphs (b) through (g) of this section.

(b) Except as otherwise provided in §63.10020(c), if you use a **CEMS to measure SO<sub>2</sub>, PM, HCl, HF, or Hg** emissions, or using a sorbent trap monitoring system to measure Hg emissions, you must demonstrate continuous compliance by using all quality-assured hourly data recorded by the CEMS (or sorbent trap monitoring system) and the other required monitoring systems (e.g., flow rate, CO<sub>2</sub>, O<sub>2</sub>, or moisture systems) to calculate the arithmetic average emissions rate in units of the standard on a continuous 30-boiler operating day (or, if alternate emissions averaging is used for Hg, 90-boiler operating day) rolling average basis, updated at the end of each new boiler operating day. Use Equation 8 to determine the 30- (or, if applicable, 90-) boiler operating day rolling average.

$$\text{Boiler operating day average} = \frac{\sum_{i=1}^n Her_i}{n} \text{ (Eq. 8)}$$

Where:

Her<sub>i</sub> is the hourly emissions rate for hour i and n is the number of hourly emissions rate values collected over 30- (or, if applicable, 90-) boiler operating days.

“(d) If you use quarterly performance testing to demonstrate compliance with one or more applicable emissions limits in Table 1 or 2 to this subpart, you

(1) May skip performance testing in those quarters during which less than 168 boiler operating hours occur, except that a performance test must be conducted at least once every calendar year.

(2) Must conduct the performance test as defined in Table 5 to this subpart and calculate the results of the testing in units of the applicable emissions standard; and

(3) Must conduct site-specific monitoring using CMS to demonstrate compliance with the site-specific monitoring requirements in Table 7 to this subpart pertaining to HCL and HF emissions from a liquid oil-fired to ensure compliance with the HCl and HF emission limits in Tables 1 and 2 to this subpart, in accordance with the requirements of §63.10000(c)(2)(iii). The monitoring must meet the general operating requirements provided in §63.10020.”

“(e) Conduct periodic performance tune-ups of your EGU(s), as specified in paragraphs (e)(1) through (9) of this section. For your first tune-up, you may perform the burner inspection any time prior to the tune-up, or you may delay the first burner inspection until the next scheduled EGU outage provided you meet the requirements of §63.10005. Subsequently, you must perform an inspection of the burner at least once every 36 calendar months unless your EGU employs neural network combustion optimization

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	<p>during normal operations in which case you must perform an inspection of the burner and combustion controls at least once every 48 calendar months. If your EGU is offline when a deadline to perform the tune-up passes, you shall perform the tune-up work practice requirements within 30 days after the re-start of the affected unit.</p> <p>(1) As applicable, inspect the burner and combustion controls, and clean or replace any components of the burner or combustion controls as necessary upon initiation of the work practice program and at least once every required inspection period. Repair of a burner or combustion control component requiring special order parts may be scheduled as follows:</p> <p>(i) Burner or combustion control component parts needing replacement that affect the ability to optimize NO<sub>x</sub> and CO must be installed within 3 calendar months after the burner inspection,</p> <p>(ii) Burner or combustion control component parts that do not affect the ability to optimize NO<sub>x</sub> and CO may be installed on a schedule determined by the operator;</p> <p>(2) As applicable, inspect the flame pattern and make any adjustments to the burner or combustion controls necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available, or in accordance with best combustion engineering practice for that burner type;</p> <p>(3) As applicable, observe the damper operations as a function of mill and/or cyclone loadings, cyclone and pulverizer coal feeder loadings, or other pulverizer and coal mill performance parameters, making adjustments and effecting repair to dampers, controls, mills, pulverizers, cyclones, and sensors;</p> <p>(4) As applicable, evaluate wind box pressures and air proportions, making adjustments and effecting repair to dampers, actuators, controls, and sensors;</p> <p>(5) Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly. Such inspection may include calibrating excess O<sub>2</sub> probes and/or sensors, adjusting overfire air systems, changing software parameters, and calibrating associated actuators and dampers to ensure that the systems are operated as designed. Any component out of calibration, in or near failure, or in a state that is likely to negate combustion optimization efforts prior to the next tune-up, should be corrected or repaired as necessary;</p> <p>(6) Optimize combustion to minimize generation of CO and NO<sub>x</sub>. This optimization should be consistent with the manufacturer's specifications, if available, or best combustion engineering practice for the applicable burner type. NO<sub>x</sub> optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion</p>
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efficiency software, control systems calibrations, adjusting combustion zone temperature profiles, and add-on controls such as SCR and SNCR; CO optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, and adjusting combustion zone temperature profiles;

(7) While operating at full load or the predominantly operated load, measure the concentration in the effluent stream of CO and NO<sub>x</sub> in ppm, by volume, and oxygen in volume percent, before and after the tune-up adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). You may use portable CO, NO<sub>x</sub> and O<sub>2</sub> monitors for this measurement. EGU's employing neural network optimization systems need only provide a single pre- and post-tune-up value rather than continual values before and after each optimization adjustment made by the system;

(8) Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (e)(1) through (e)(9) of this section including:

(i) The concentrations of CO and NO<sub>x</sub> in the effluent stream in ppm by volume, and oxygen in volume percent, measured before and after an adjustment of the EGU combustion systems;

(ii) A description of any corrective actions taken as a part of the combustion adjustment; and

(iii) The type(s) and amount(s) of fuel used over the 12 calendar months prior to an adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period; and

(9) Report the dates of the initial and subsequent tune-ups in hard copy as specified in §63.10031(f)(5), until April 16, 2017. After April 16, 2017, report the date of all tune-ups electronically, in accordance with §63.10031(f). The tune-up report date is the date when tune-up requirements in paragraphs (e)(6) and (7) of this section are completed.

“(f) You must submit the reports required under §63.10031 and, if applicable, the reports required under appendices A and B to this subpart. The electronic reports required by appendices A and B to this subpart must be sent to the Administrator electronically in a format prescribed by the Administrator, as provided in §63.10031. CEMS data (except for PM CEMS and any approved alternative monitoring using a HAP metals CEMS) shall be submitted using EPA's Emissions Collection and Monitoring Plan System (ECMPS) Client Tool. Other data, including PM CEMS data, HAP metals CEMS data, and CEMS performance test detail reports, shall be submitted in the file format generated through use of

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EPA's Electronic Reporting Tool, the Compliance and Emissions Data Reporting Interface, or alternate electronic file format, all as provided for under §63.10031.

(g) You must report each instance in which you did not meet an applicable emissions limit or operating limit in Tables 1 through 4 to this subpart or failed to conduct a required tune-up. These instances are deviations from the requirements of this subpart. These deviations must be reported according to §63.10031.

(h) You must keep records as specified in §63.10032 during periods of startup and shutdown.

(1) You may use the diluent cap and default gross output values, as described in §63.10007(f), during startup periods or shutdown periods.

(2) You must operate all CMS, collect data, calculate pollutant emission rates, and record data during startup periods or shutdown periods.

(3) You must report the information as required in §63.10031.

(4) You may choose to submit an alternative non-opacity emission standard, in accordance with the requirements contained in §63.10011(g)(4). Until promulgation in the FEDERAL REGISTER of the final alternative non-opacity emission standard, you shall comply with paragraph (1) of the definition of “startup” in §63.10042.

(i) You must provide reports as specified in §63.10031 concerning activities and periods of startup and shutdown.”

**Table 7 to Subpart UUUUU of Part 63—Demonstrating Continuous Compliance**

As stated in §63.10021, you must show continuous compliance with the emission limitations for affected sources according to the following:

<b>If you use one of the following to meet applicable emissions limits, operating limits, or work practice standards</b>	<b>You demonstrate continuous compliance by</b>
1. <b>CEMS to measure filterable PM, SO<sub>2</sub>, HCl, HF, or Hg emissions</b> , or using a sorbent trap monitoring system to measure Hg	Calculating the 30- (or 90-) boiler operating day rolling arithmetic average emissions rate in units of the applicable emissions standard basis at the end of each boiler operating day using all of the quality assured hourly average CEMS or sorbent trap data for the previous 30- (or 90-) boiler operating days, excluding data recorded during periods of startup or shutdown.
4. Quarterly performance testing for <b>coal-fired</b> , solid oil derived fired, or liquid oil-fired EGUs to measure compliance with one or more non-PM (or its alternative emission limits) applicable emissions limit in Table 1 or	Calculating the results of the testing in units of the applicable emissions standard.

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	2, or PM (or its alternative emission limits) applicable emissions limit in Table 2	
	5. Conducting periodic performance tune-ups of your EGU(s)	Conducting periodic performance tune-ups of your EGU(s), as specified in §63.10021(e).
	6. Work practice standards for coal-fired, liquid oil-fired, or solid oil-derived fuel-fired EGUs during startup	Operating in accordance with Table 3.
	7. Work practice standards for coal-fired, liquid oil-fired, or solid oil-derived fuel-fired EGUs during shutdown	Operating in accordance with Table 3.
	<p><b>§63.10022 - <u>How do I demonstrate continuous compliance under the emissions averaging provision?</u></b></p> <p>(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of paragraphs (a)(1) through (4) of this section.</p> <p>(1) For each 30- (or 90-) day rolling average period, demonstrate compliance with the average weighted emissions limit for the existing units participating in the emissions averaging option as determined in §63.10009(f) and (g);</p> <p>(2) <i>Not Applicable.</i></p> <p>(3) For each existing unit participating in the emissions averaging option venting to a common stack configuration containing affected units from other subcategories, maintain the appropriate operating limit for each unit as specified in Table 4 to this subpart that applies.</p> <p>(4) For each existing EGU participating in the emissions averaging option, operate in accordance with the startup or shutdown work practice requirements given in Table 3 to this subpart.</p> <p>(b) Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (3) of this section is a deviation.”</p>	
<b>13.4</b>	<p><b><u>Record Keeping Requirements:</u></b></p> <p><b>Note:</b> All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06C(5)(g)]</p> <p><u>Control of HAPs Emissions</u></p> <p><b><u>Notification, Reports, and Records</u></b></p> <p><b>§63.10032 - <u>What records must I keep?</u></b></p> <p>“(a) You must keep records according to paragraphs (a)(1) and (2) of this section. If you are required to (or elect to) continuously monitor Hg and/or</p>	

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	<p>HCl and/or HF emissions, you must also keep the records required under appendix A and/or appendix B to this subpart.</p> <p>(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).</p> <p>(2) Records of performance stack tests, fuel analyses, or other compliance demonstrations and performance evaluations, as required in §63.10(b)(2)(viii).</p> <p>(b) For each CEMS and CPMS, you must keep records according to paragraphs (b)(1) through (4) of this section.</p> <p>(1) Records described in §63.10(b)(2)(vi) through (xi).</p> <p>(2) Previous (<i>i.e.</i>, superseded) versions of the performance evaluation plan as required in §63.8(d)(3).</p> <p>(3) Request for alternatives to relative accuracy test for CEMS as required in §63.8(f)(6)(i).</p> <p>(4) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.</p> <p>(c) You must keep the records required in Table 7 to this subpart including records of all monitoring data and calculated averages for applicable PM CPMS operating limits to show continuous compliance with each emission limit and operating limit that applies to you.</p> <p>(d) For each EGU subject to an emission limit, you must also keep the records in paragraphs (d)(1) through (3) of this section.</p> <p>(1) You must keep records of monthly fuel use by each EGU, including the type(s) of fuel and amount(s) used.”</p> <p>(2) <i>Not Applicable.</i></p> <p>(3) <i>Not Applicable.</i></p> <p>“(e) If you elect to average emissions consistent with §63.10009, you must additionally keep a copy of the emissions averaging implementation plan required in §63.10009(g), all calculations required under §63.10009, including daily records of heat input or steam generation, as applicable, and monitoring records consistent with §63.10022.</p> <p>(f) Regarding startup periods or shutdown periods:</p> <p>(1) Should you choose to rely on paragraph (1) of the definition of “startup” in §63.10042 for your EGU, you must keep records of the occurrence and duration of each startup or shutdown;</p> <p>(2) Should you choose to rely on paragraph (2) of the definition of “startup” in §63.10042 for your EGU, you must keep records of:</p>
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<b>Table IV – 13: MACT Subpart UUUUU</b>	
	<p>(i) The determination of the maximum possible clean fuel capacity for each EGU;</p> <p>(ii) The determination of the maximum possible hourly clean fuel heat input and of the hourly clean fuel heat input for each EGU; and</p> <p>(iii) The information required in §63.10020(e).</p> <p>(3) You must keep records of the determination of the maximum hourly clean fuel heat input and of the hourly clean fuel heat input for each EGU; and</p> <p>(4) You must keep records of the information required in §63.10020(e).</p> <p>(g) You must keep records of the occurrence and duration of each malfunction of an operation (<i>i.e.</i>, process equipment) or the air pollution control and monitoring equipment.</p> <p>(h) You must keep records of actions taken during periods of malfunction to minimize emissions in accordance with §63.10000(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.</p> <p>(i) You must keep records of the type(s) and amount(s) of fuel used during each startup or shutdown.”</p> <p><b>§63.10033 - <u>In what form and how long must I keep my records?</u></b>  “(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).  (b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.  (c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years.”</p>
<b>13.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><u>Control of HAPs Emissions</u>  <b><u>Notification, Reports, and Records</u></b>  <b>§63.10030 - <u>What notifications must I submit and when?</u></b>  “(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8 (e), (f)(4) and (6), and 63.9 (b) through (h) that apply to you by the dates specified.  (b) As specified in §63.9(b)(2), if you startup your EGU that is an affected source before April 16, 2012, you must submit an Initial Notification not later than 120 days after April 16, 2012.”</p>

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“(d) When you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 30 days before the performance test is scheduled to begin.

(e) When you are required to conduct an initial compliance demonstration as specified in §63.10011(a), you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (7), as applicable.

(1) A description of the affected source(s) including identification of the subcategory of the source, the design capacity of the source, a description of the add-on controls used on the source, description of the fuel(s) burned, including whether the fuel(s) were determined by you or EPA through a petition process to be a non-waste under 40 CFR 241.3, whether the fuel(s) were processed from discarded non-hazardous secondary materials within the meaning of 40 CFR 241.3, and justification for the selection of fuel(s) burned during the performance test.

(2) Summary of the results of all performance tests and fuel analyses and calculations conducted to demonstrate initial compliance including all established operating limits.

(3) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing; fuel moisture analyses; performance testing with operating limits (e.g., use of PM CPMS); **CEMS**; or a sorbent trap monitoring system.

(4) Identification of whether you plan to demonstrate compliance by emissions averaging.

(5) A signed certification that you have met all applicable emission limits and work practice standards.

(6) If you had a deviation from any emission limit, work practice standard, or operating limit, you must also submit a brief description of the deviation, the duration of the deviation, emissions point identification and the cause of the deviation in the Notification of Compliance Status report.

(7) In addition to the information required in §63.9(h)(2), your notification of compliance status must include the following:

(i) A summary of the results of the annual performance tests and documentation of any operating limits that were reestablished during this test, if applicable. If you are conducting stack tests once every 3 years consistent with §63.10005(h)(1)(i), the date of each stack test conducted during the previous 3 years, a comparison of emission level you achieved in each stack test conducted during the previous 3 to the 50 percent emission limit threshold required in §63.10006(i), and a statement as to whether there have been any operational changes since the last stack test that could increase emissions.



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	<p>(ii) Certifications of compliance, as applicable, and must be signed by a responsible official stating:</p> <p>(A) “This EGU complies with the requirements in §63.10021(a) to demonstrate continuous compliance.” and</p> <p>(B) “No secondary materials that are solid waste were combusted in any affected unit.”</p> <p>“(8) Identification of whether you plan to rely on paragraph (1) or (2) of the definition of “startup” in §63.10042.</p> <p>(i) Should you choose to rely on paragraph (2) of the definition of “startup” in §63.10042 for your EGU, you shall include a report that identifies:</p> <p>(A) The original EGU installation date;</p> <p>(B) The original EGU design characteristics, including, but not limited to, fuel and PM controls;</p> <p>(C) Each design PM control device efficiency established during performance testing or while operating in periods other than startup and shutdown periods;</p> <p>(D) The design PM emission rate from the EGU in terms of pounds PM per MMBtu and pounds PM per hour established during performance testing or while operating in periods other than startup and shutdown periods ;</p> <p>(E) The design time from start of fuel combustion to necessary conditions for each PM control device startup;</p> <p>(F) Each design PM control device efficiency upon startup of the PM control device, if different from the efficiency provided in paragraph (e)(8)(i)(C) of this section;</p> <p>(G) Current EGU PM producing characteristics, including, but not limited to, fuel mix and PM controls, if different from the characteristics provided in paragraph (e)(8)(i)(B) of this section; The design EGU uncontrolled PM emission rate in terms of pounds PM per hour;</p> <p>(H) Current PM control device efficiency from each PM control device, if different from the efficiency provided in paragraph (e)(8)(i)(C) of this section;</p> <p>(I) Current PM emission rate from the EGU in terms of pounds PM per MMBtu and pounds per hour if different from the rate provided in paragraph (e)(8)(i)(D) of this section;</p> <p>(J) Current time from start of fuel combustion to conditions necessary for each PM control device startup, if different from the time provided in paragraph (e)(8)(i)(E) of this section;</p> <p>(K) Current PM control device efficiency upon startup of each PM control device; if different from the efficiency provided in paragraph (e)(8)(i)(H) of this section;</p>
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(ii) The report shall be prepared, signed, and sealed by a professional engineer licensed in the state where your EGU is located.”

**§63.10031 - What reports must I submit and when?**

“(a) You must submit each report in Table 8 to this subpart that applies to you. If you are required to (or elect to) continuously monitor Hg and/or HCl and/or HF emissions, you must also submit the electronic reports required under appendix A and/or appendix B to the subpart, at the specified frequency.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 8 to this subpart and according to the requirements in paragraphs (b)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.9984 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in §63.9984.

(2) The first compliance report must be postmarked or submitted electronically no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.9984.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or submitted electronically no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this chapter, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) The compliance report must contain the information required in paragraphs (c)(1) through (94) of this section.

(1) The information required by the summary report located in 63.10(e)(3)(vi).

(2) The total fuel use by each affected source subject to an emission limit, for each calendar month within the semiannual reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a

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	<p>non-waste determination by EPA or your basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.</p> <p>(3) Indicate whether you burned new types of fuel during the reporting period. If you did burn new types of fuel, you must include the date of the performance test where that fuel was in use.</p> <p>(4) Include the date of the most recent tune-up for each EGU. The date of the tune-up is the date the provisions specified in §63.10021(e)(6) and (7) were completed.</p> <p>(5) Should you choose to rely on paragraph (2) of the definition of “startup” in §63.10042 for your EGU, for each instance of startup or shutdown you shall:</p> <p>(i) Include the maximum clean fuel storage capacity and the maximum hourly heat input that can be provided for each clean fuel determined according to the requirements of §63.10032(f).</p> <p>(ii) Include the information required to be monitored, collected, or recorded according to the requirements of §63.10020(e).</p> <p>(iii) If you choose to use CEMS to demonstrate compliance with numerical limits, include hourly average CEMS values and hourly average flow values during startup periods or shutdown periods. Use units of milligrams per cubic meter for PM CEMS, micrograms per cubic meter for Hg CEMS values, and ppmv for HCl, HF, or SO<sub>2</sub> CEMS values. Use units of standard cubic meters per hour on a wet basis for flow values.</p> <p>(iv) If you choose to use a separate sorbent trap measurement system for startup or shutdown reporting periods, include hourly average mercury concentration values in terms of micrograms per cubic meter.</p> <p>(v) If you choose to use a PM CPMS, include hourly average operating parameter values in terms of the operating limit, as well as the operating parameter to PM correlation equation.</p> <p>(6) You must report emergency bypass information annually from EGUs with LEE status.</p> <p>(7) A summary of the results of the annual performance tests and documentation of any operating limits that were reestablished during the test, if applicable. If you are conducting stack tests once every 3 years to maintain LEE status, consistent with §63.10006(b), the date of each stack test conducted during the previous 3 years, a comparison of emission level you achieved in each stack test conducted during the previous 3 years to the 50 percent emission limit threshold required in §63.10005(h)(1)(i), and a statement as to whether there have been any operational changes since the last stack test that could increase emissions.</p> <p>(8) A certification.</p>
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(9) If you have a deviation from any emission limit, work practice standard, or operating limit, you must also submit a brief description of the deviation, the duration of the deviation, emissions point identification, and the cause of the deviation.

(d) For each excess emissions occurring at an affected source where you are using a CMS to comply with that emission limit or operating limit, you must include the information required in §63.10(e)(3)(v) in the compliance report specified in section (c).

(e) Each affected source that has obtained a Title V operating permit pursuant to part 70 or part 71 of this chapter must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to Table 8 to this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any emission limit, operating limit, or work practice requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. Submission of a compliance report does not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(f) On or after **April 16, 2017**, within 60 days after the date of completing each performance test, you must submit the performance test reports required by this subpart to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). Performance test data must be submitted in the file format generated through use of EPA's Electronic Reporting Tool (ERT) (see <http://www.epa.gov/ttn/chief/ert/index.html>). Only data collected using those test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the

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	<p>confidential business information, to the delegated authority in the format specified by the delegated authority.</p> <p>(1) On or after <b>April 16, 2017</b>, within 60 days after the date of completing each <b>CEMS (SO<sub>2</sub>, PM, HCl, HF, and Hg)</b> performance evaluation test, as defined in §63.2 and required by this subpart, you must submit the relative accuracy test audit (RATA) data (or, for PM CEMS, RCA and RRA data) required by this subpart to EPA's WebFIRE database by using CEDRI that is accessed through EPA's CDX (<a href="http://www.epa.gov/cdx">www.epa.gov/cdx</a>). The RATA data shall be submitted in the file format generated through use of EPA's Electronic Reporting Tool (ERT) (<a href="http://www.epa.gov/ttn/chief/ert/index.html">http://www.epa.gov/ttn/chief/ert/index.html</a>). Only RATA data compounds listed on the ERT Web site are subject to this requirement. Owners or operators who claim that some of the information being submitted for RATAs is confidential business information (CBI) shall submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) by registered letter to EPA and the same ERT file with the CBI omitted to EPA via CDX as described earlier in this paragraph. The compact disk or other commonly used electronic storage media shall be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. At the discretion of the delegated authority, owners or operators shall also submit these RATAs to the delegated authority in the format specified by the delegated authority. Owners or operators shall submit calibration error testing, drift checks, and other information required in the performance evaluation as described in §63.2 and as required in this chapter.</p> <p>(2) On or after <b>April 16, 2017</b>, for a PM CEMS, PM CPMS, or approved alternative monitoring using a HAP metals CEMS, within 60 days after the reporting periods ending on March 31st, June 30th, September 30th, and December 31st, you must submit quarterly reports to EPA's WebFIRE database by using the CEDRI that is accessed through EPA's CDX (<a href="http://www.epa.gov/cdx">www.epa.gov/cdx</a>). You must use the appropriate electronic reporting form in CEDRI or provide an alternate electronic file consistent with EPA's reporting form output format. For each reporting period, the quarterly reports must include all of the calculated 30-boiler operating day rolling average values derived from the CEMS and PM CPMS.</p> <p>(3) Reports for an SO<sub>2</sub> CEMS, a Hg CEMS or sorbent trap monitoring system, an HCl or HF CEMS, and any supporting monitors for such systems (such as a diluent or moisture monitor) shall be submitted using the ECMPMS Client Tool, as provided for in Appendices A and B to this subpart and §63.10021(f).</p>
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(4) On or after **April 16, 2017**, submit the compliance reports required under paragraphs (c) and (d) of this section and the notification of compliance status required under §63.10030(e) to EPA's WebFIRE database by using the CEDRI that is accessed through EPA's CDX ([www.epa.gov/cdx](http://www.epa.gov/cdx)). You must use the appropriate electronic reporting form in CEDRI or provide an alternate electronic file consistent with EPA's reporting form output format.

(5) All reports required by this subpart not subject to the requirements in paragraphs (f) introductory text and (f)(1) through (4) of this section must be sent to the Administrator at the appropriate address listed in §63.13. If acceptable to both the Administrator and the owner or operator of an EGU, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to paragraphs (f) introductory text and (f)(1) through (4) of this section in paper format.

(6) Prior to **April 16, 2017**, all reports subject to electronic submittal in paragraphs (f) introductory text, (f)(1), (2), and (4) shall be submitted to the EPA at the frequency specified in those paragraphs in electronic portable document format (PDF) using the ECMPS Client Tool. Each PDF version of a submitted report must include sufficient information to assess compliance and to demonstrate that the testing was done properly. The following data elements must be entered into the ECMPS Client Tool at the time of submission of each PDF file:

(i) The facility name, physical address, mailing address (if different from the physical address), and county;

(ii) The ORIS code (or equivalent ID number assigned by EPA's Clean Air Markets Division (CAMD)) and the Facility Registry System (FRS) ID;

(iii) The EGU (or EGUs) to which the report applies. Report the EGU IDs as they appear in the CAMD Business System;

(iv) If any of the EGUs in paragraph (f)(6)(iii) of this section share a common stack, indicate which EGUs share the stack. If emissions data are monitored and reported at the common stack according to part 75 of this chapter, report the ID number of the common stack as it is represented in the electronic monitoring plan required under §75.53 of this chapter;

(v) If any of the EGUs described in paragraph (f)(6)(iii) of this section are in an averaging plan under §63.10009, indicate which EGUs are in the plan and whether it is a 30- or 90-day averaging plan;

(vi) The identification of each emission point to which the report applies. An "emission point" is a point at which source effluent is released to the atmosphere and is either a dedicated stack that serves one of the EGUs identified in paragraph (f)(6)(iii) of this section or a common stack that

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serves two or more of those EGUs. To identify an emission point, associate it with the EGU or stack ID in the CAMD Business system or the electronic monitoring plan (e.g., “Unit 2 stack,” “common stack CS001,” or “multiple stack MS001”);

(vii) The rule citation (e.g., §63.10031(f)(1), §63.10031(f)(2), etc.) for which the report is showing compliance;

(viii) The pollutant(s) being addressed in the report;

(ix) The reporting period being covered by the report (if applicable);

(x) The relevant test method that was performed for a performance test (if applicable);

(xi) The date the performance test was conducted (if applicable); and

(xii) The responsible official’s name, title, and phone number.

(g) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded.”

**Table 8 to Subpart UUUUU of Part 63—Reporting Requirements**

As stated in §63.10031, you must comply with the following requirements for reports:

<b>You must submit a:</b>	<b>The report must contain:</b>	<b>You must submit the report:</b>
1. Compliance report	a. Information required in §63.10031(c)(1) through (4); and b. If there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards in Table 3 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, and operating parameter monitoring systems, were out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the CMSs were out-of-control during the reporting period; and	Semiannually according to the requirements in §63.10031(b).
	c. If you have a deviation from any emission limitation (emission limit and operating limit) or work practice standard during the reporting period, the report must contain the information in §63.10031(d). If there were periods during which the CMSs, including continuous emissions monitoring systems and continuous parameter monitoring systems, were out-of-control, as	

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		specified in §63.8(c)(7), the report must contain the information in §63.10031(e)	

**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

<b>Table IV–14: Cross State Air Pollution Rule (CSAPR)</b>	
<b>14.0</b>	<p><b><u>Emissions Unit Number(s): FSC-BS-Unit1 &amp; FSC-BS-Unit2; FSC-HAW-Unit1 &amp; FSC-HAW-Unit4; FSC-HAW-Unit2 &amp; FSC-HAW-Unit3 (Cont'd)</u></b></p> <p><b>FSC-BS-Unit1 and FSC-BS-Unit2:</b> Two (2) solid fossil fuel-fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site. <b>[MDE Reg. Nos. 3-0015 &amp; 3-0016]</b> <i>(Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).</i></p> <p><b>FSC-HAW-Unit1:</b> H.A. Wagner Unit 1 is a residual oil or natural gas fired unit <b>[MDE Reg. No. 5-0469]</b></p> <p><b>FSC-HAW-Unit2:</b> H.A. Wagner Unit 2 is a natural gas unit. <b>[MDE Reg. No. 3-0017]</b></p> <p><b>FSC-HAW-Unit3:</b> H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. <b>[MDE Reg. No. 3-0003]</b> <i>(Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025).</i></p> <p><b>FSC-HAW-Unit4:</b> H.A. Wagner Unit 4 is a residual oil-fired unit with natural gas fired used for start-up. <b>[MDE Reg. No. 4-0017].</b></p>
<b>14.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p><b>COMAR 26.11.28.02 - Requirements.</b></p> <p>A. This chapter incorporates by reference the U.S. EPA CSAPR and the CSAPR Update, including the definitions, criteria, and procedures therein.</p> <p>B. <u>Trading Program Requirements.</u></p> <p>(1) This chapter incorporates by reference provisions of the CSAPR NO<sub>x</sub> Annual Trading Program set forth in 40 CFR Part 97, Subpart AAAAA, as</p>



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**Table IV–14: Cross State Air Pollution Rule (CSAPR)**

published July 1, 2017, and associated reference methods, performance specifications, and other test methods referenced by these standards, as applicable to existing and new units in Maryland, except the provisions at 40 CFR §97.411(b)(2) and (c)(5)(iii), 97.412(b), and 97.421(h) and (j).  
 (2) This chapter incorporates by reference provisions of the CSAPR NO<sub>x</sub> Ozone Season Group 3 Trading Program set forth in 40 CFR Part 97, Subpart EEEEE, as published July 1, 2017, and associated reference methods, performance specifications and other test methods referenced by these standards, as applicable to existing and new units in Maryland, except the provisions at 40 CFR §§97.811(b)(2) and (c)(5)(iii), 97.812(b), and 97.821(h) and (j). (***This is superseded by Group 3 Subpart GGGGG published April 30, 2021, effective June 29, 2021.***)  
 (3) This chapter incorporates by reference provisions of the CSAPR SO<sub>2</sub> Group 1 Trading Program set forth in 40 CFR Part 97, Subpart CCCCC, as published July 1, 2017, and associated reference methods, performance specifications and other test methods referenced by these standards, as applicable to existing and new units in Maryland, except the provisions at 40 CFR §§97.611(b)(2) and (c)(5)(iii), 97.612(b), and 97.621(h) and (j).

**A. 40 CFR Part 97 Subpart AAAAA—CSAPR NO<sub>x</sub> Annual Trading Program**

**§97.406 - Standard requirements.**

**(a) Designated representative requirements.** The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with §§97.413 through 97.418.

**(b) Emissions monitoring, reporting, and recordkeeping requirements.**

(1) The owners and operators, and the designated representative, of each CSAPR NO<sub>x</sub> Annual source and each CSAPR NO<sub>x</sub> Annual unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of §§97.430 through 97.435.

(2) The emissions data determined in accordance with §§97.430 through 97.435 shall be used to calculate allocations of CSAPR NO<sub>x</sub> Annual allowances under §§97.411(a)(2) and (b) and 97.412 and to determine compliance with the CSAPR NO<sub>x</sub> Annual emissions limitation and assurance provisions under paragraph (c) of this section, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with §§97.430 through

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**Table IV–14: Cross State Air Pollution Rule (CSAPR)**

97.435 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

**(c) NO<sub>x</sub> emissions requirements**—(1) CSAPR NO<sub>x</sub> Annual emissions limitation. (i) As of the allowance transfer deadline for a control period in a given year, the owners, and operators of each CSAPR NO<sub>x</sub> Annual source and each CSAPR NO<sub>x</sub> Annual unit at the source shall hold, in the source's compliance account, CSAPR NO<sub>x</sub> Annual allowances available for deduction for such control period under §97.424(a) in an amount not less than the tons of total NO<sub>x</sub> emissions for such control period from all CSAPR NO<sub>x</sub> Annual units at the source.

(ii) If total NO<sub>x</sub> emissions during a control period in a given year from the CSAPR NO<sub>x</sub> Annual units at a CSAPR NO<sub>x</sub> Annual source are in excess of the CSAPR NO<sub>x</sub> Annual emissions limitation set forth in paragraph (c)(1)(i) of this section, then:

(A) The owners and operators of the source and each CSAPR NO<sub>x</sub> Annual unit at the source shall hold the CSAPR NO<sub>x</sub> Annual allowances required for deduction under §97.424(d); and

(B) The owners and operators of the source and each CSAPR NO<sub>x</sub> Annual unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of this subpart and the Clean Air Act.

(2) CSAPR NO<sub>x</sub> Annual assurance provisions. (i) If total NO<sub>x</sub> emissions during a control period in a given year from all CSAPR NO<sub>x</sub> Annual units at CSAPR NO<sub>x</sub> Annual sources in a State (and Indian country within the borders of such State) exceed the State assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO<sub>x</sub> emissions during such control period exceeds the common designated representative's assurance level for the State and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NO<sub>x</sub> Annual allowances available for deduction for such control period under §97.425(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with §97.425(b), of multiplying—

(A) The quotient of the amount by which the common designated representative's share of such NO<sub>x</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such

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sources and units in the State (and Indian country within the borders of such State) for such control period, by which each common designated representative's share of such NO<sub>x</sub> emissions exceeds the respective common designated representative's assurance level; and

(B) The amount by which total NO<sub>x</sub> emissions from all CSAPR NO<sub>x</sub> Annual units at CSAPR NO<sub>x</sub> Annual sources in the State (and Indian country within the borders of such State) for such control period exceed the State assurance level.

(ii) The owners and operators shall hold the CSAPR NO<sub>x</sub> Annual allowances required under paragraph (c)(2)(i) of this section, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after the year of such control period.

(iii) Total NO<sub>x</sub> emissions from all CSAPR NO<sub>x</sub> Annual units at CSAPR NO<sub>x</sub> Annual sources in a State (and Indian country within the borders of such State) during a control period in a given year exceed the State assurance level if such total NO<sub>x</sub> emissions exceed the sum, for such control period, of the State NO<sub>x</sub> Annual trading budget under §97.410(a) and the State's variability limit under §97.410(b).

(iv) It shall not be a violation of this subpart or of the Clean Air Act if total NO<sub>x</sub> emissions from all CSAPR NO<sub>x</sub> Annual units at CSAPR NO<sub>x</sub> Annual sources in a State (and Indian country within the borders of such State) during a control period exceed the State assurance level or if a common designated representative's share of total NO<sub>x</sub> emissions from the CSAPR NO<sub>x</sub> Annual units at CSAPR NO<sub>x</sub> Annual sources in a State (and Indian country within the borders of such State) during a control period exceeds the common designated representative's assurance level.

(v) To the extent the owners and operators fail to hold CSAPR NO<sub>x</sub> Annual allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) of this section,

(A) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B) Each CSAPR NO<sub>x</sub> Annual allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) of this section and each day of such control period shall constitute a separate violation of this subpart and the Clean Air Act.

(3) Compliance periods. (i) A CSAPR NO<sub>x</sub> Annual unit shall be subject to the requirements under paragraph (c)(1) of this section for the control period starting on the later of January 1, 2015, or the deadline for meeting the unit's monitor certification requirements under §97.430(b) and for each control period thereafter.

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(ii) A CSAPR NO<sub>x</sub> Annual unit shall be subject to the requirements under paragraph (c)(2) of this section for the control period starting on the later of January 1, 2017, or the deadline for meeting the unit's monitor certification requirements under §97.430(b) and for each control period thereafter.

(4) Vintage of CSAPR NO<sub>x</sub> Annual allowances held for compliance. (i) A CSAPR NO<sub>x</sub> Annual allowance held for compliance with the requirements under paragraph (c)(1)(i) of this section for a control period in a given year must be a CSAPR NO<sub>x</sub> Annual allowance that was allocated or auctioned for such control period or a control period in a prior year.

(ii) A CSAPR NO<sub>x</sub> Annual allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) of this section for a control period in a given year must be a CSAPR NO<sub>x</sub> Annual allowance that was allocated or auctioned for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each CSAPR NO<sub>x</sub> Annual allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with this subpart.

(6) Limited authorization. A CSAPR NO<sub>x</sub> Annual allowance is a limited authorization to emit one ton of NO<sub>x</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:

(i) Such authorization shall only be used in accordance with the CSAPR NO<sub>x</sub> Annual Trading Program; and

(ii) Notwithstanding any other provision of this subpart, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A CSAPR NO<sub>x</sub> Annual allowance does not constitute a property right.

(d) Title V permit requirements. (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO<sub>x</sub> Annual allowances in accordance with this subpart.

(2) A description of whether a unit is required to monitor and report NO<sub>x</sub> emissions using a continuous emission monitoring system (under subpart H of part 75 of this chapter), an excepted monitoring system (under appendices D and E to part 75 of this chapter), a low mass emissions excepted monitoring methodology (under §75.19 of this chapter), or an alternative monitoring system (under subpart E of part 75 of this chapter) in accordance with §§97.430 through 97.435 may be added to, or changed in, a title V permit using minor permit modification procedures in

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accordance with §§70.7(e)(2) and 71.7(e)(1) of this chapter, provided that the requirements applicable to the described monitoring and reporting (as added or changed, respectively) are already incorporated in such permit. This paragraph explicitly provides that the addition of, or change to, a unit's description as described in the prior sentence is eligible for minor permit modification procedures in accordance with §§70.7(e)(2)(i)(B) and 71.7(e)(1)(i)(B) of this chapter.

**(e) Additional recordkeeping and reporting requirements.** (1) Unless otherwise provided, the owners and operators of each CSAPR NO<sub>x</sub> Annual source and each CSAPR NO<sub>x</sub> Annual unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i) The certificate of representation under §97.416 for the designated representative for the source and each CSAPR NO<sub>x</sub> Annual unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under §97.416 changing the designated representative.

(ii) All emissions monitoring information, in accordance with this subpart.

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO<sub>x</sub> Annual Trading Program.

(2) The designated representative of a CSAPR NO<sub>x</sub> Annual source and each CSAPR NO<sub>x</sub> Annual unit at the source shall make all submissions required under the CSAPR NO<sub>x</sub> Annual Trading Program, except as provided in §97.418. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in parts 70 and 71 of this chapter.

**(f) Liability.** (1) Any provision of the CSAPR NO<sub>x</sub> Annual Trading Program that applies to a CSAPR NO<sub>x</sub> Annual source or the designated representative of a CSAPR NO<sub>x</sub> Annual source shall also apply to the owners and operators of such source and of the CSAPR NO<sub>x</sub> Annual units at the source.

(2) Any provision of the CSAPR NO<sub>x</sub> Annual Trading Program that applies to a CSAPR NO<sub>x</sub> Annual unit or the designated representative of

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a CSAPR NO<sub>x</sub> Annual unit shall also apply to the owners and operators of such unit.  
 (g) **Effect on other authorities.** No provision of the CSAPR NO<sub>x</sub> Annual Trading Program or exemption under §97.405 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO<sub>x</sub> Annual source or CSAPR NO<sub>x</sub> Annual unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act.”

**B. 40 CFR Part 97 Subpart CCCCC—CSAPR SO<sub>2</sub> Group 1 Trading Program**

**§97.606 - Standard requirements.**

“(a) **Designated representative requirements.** The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with §§97.613 through 97.618.

(b) **Emissions monitoring, reporting, and recordkeeping requirements.** (1) The owners and operators, and the designated representative, of each CSAPR SO<sub>2</sub> Group 1 source and each CSAPR SO<sub>2</sub> Group 1 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of §§97.630 through 97.635. (2) The emissions data determined in accordance with §§97.630 through 97.635 shall be used to calculate allocations of CSAPR SO<sub>2</sub> Group 1 allowances under §§97.611(a)(2) and (b) and 97.612 and to determine compliance with the CSAPR SO<sub>2</sub> Group 1 emissions limitation and assurance provisions under paragraph (c) of this section, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with §§97.630 through 97.635 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) **SO<sub>2</sub> emissions requirements—(1) CSAPR SO<sub>2</sub> Group 1 emissions limitation.** (i) As of the allowance transfer deadline for a control period in a given year, the owners, and operators of each CSAPR SO<sub>2</sub> Group 1 source and each CSAPR SO<sub>2</sub> Group 1 unit at the source shall hold, in the source's compliance account, CSAPR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under §97.624(a) in an amount not less than the tons of total SO<sub>2</sub> emissions for such control period from all CSAPR SO<sub>2</sub> Group 1 units at the source.

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(ii) If total SO<sub>2</sub> emissions during a control period in a given year from the CSAPR SO<sub>2</sub> Group 1 units at a CSAPR SO<sub>2</sub> Group 1 source are in excess of the CSAPR SO<sub>2</sub> Group 1 emissions limitation set forth in paragraph (c)(1)(i) of this section, then:

(A) The owners and operators of the source and each CSAPR SO<sub>2</sub> Group 1 unit at the source shall hold the CSAPR SO<sub>2</sub> Group 1 allowances required for deduction under §97.624(d); and

(B) The owners and operators of the source and each CSAPR SO<sub>2</sub> Group 1 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of this subpart and the Clean Air Act.

(2) CSAPR SO<sub>2</sub> Group 1 assurance provisions. (i) If total SO<sub>2</sub> emissions during a control period in a given year from all CSAPR SO<sub>2</sub> Group 1 units at CSAPR SO<sub>2</sub> Group 1 sources in a State (and Indian country within the borders of such State) exceed the State assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such SO<sub>2</sub> emissions during such control period exceeds the common designated representative's assurance level for the State and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under §97.625(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with §97.625(b), of multiplying—

(A) The quotient of the amount by which the common designated representative's share of such SO<sub>2</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the State (and Indian country within the borders of such State) for such control period, by which each common designated representative's share of such SO<sub>2</sub> emissions exceeds the respective common designated representative's assurance level; and

(B) The amount by which total SO<sub>2</sub> emissions from all CSAPR SO<sub>2</sub> Group 1 units at CSAPR SO<sub>2</sub> Group 1 sources in the State (and Indian country within the borders of such State) for such control period exceed the State assurance level.

(ii) The owners and operators shall hold the CSAPR SO<sub>2</sub> Group 1 allowances required under paragraph (c)(2)(i) of this section, as of

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midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after the year of such control period.

(iii) Total SO<sub>2</sub> emissions from all CSAPR SO<sub>2</sub> Group 1 units at CSAPR SO<sub>2</sub> Group 1 sources in a State (and Indian country within the borders of such State) during a control period in a given year exceed the State assurance level if such total SO<sub>2</sub> emissions exceed the sum, for such control period, of the State SO<sub>2</sub> Group 1 trading budget under §97.610(a) and the State's variability limit under §97.610(b).

(iv) It shall not be a violation of this subpart or of the Clean Air Act if total SO<sub>2</sub> emissions from all CSAPR SO<sub>2</sub> Group 1 units at CSAPR SO<sub>2</sub> Group 1 sources in a State (and Indian country within the borders of such State) during a control period exceed the State assurance level or if a common designated representative's share of total SO<sub>2</sub> emissions from the CSAPR SO<sub>2</sub> Group 1 units at CSAPR SO<sub>2</sub> Group 1 sources in a State (and Indian country within the borders of such State) during a control period exceeds the common designated representative's assurance level.

(v) To the extent the owners and operators fail to hold CSAPR SO<sub>2</sub> Group 1 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) of this section,

(A) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B) Each CSAPR SO<sub>2</sub> Group 1 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) of this section and each day of such control period shall constitute a separate violation of this subpart and the Clean Air Act.

(3) Compliance periods. (i) A CSAPR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(1) of this section for the control period starting on the later of January 1, 2015, or the deadline for meeting the unit's monitor certification requirements under §97.630(b) and for each control period thereafter.

(ii) A CSAPR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(2) of this section for the control period starting on the later of January 1, 2017, or the deadline for meeting the unit's monitor certification requirements under §97.630(b) and for each control period thereafter.

(4) Vintage of CSAPR SO<sub>2</sub> Group 1 allowances held for compliance. (i) A CSAPR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraph (c)(1)(i) of this section for a control period in a given year must be a CSAPR SO<sub>2</sub> Group 1 allowance that was



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allocated or auctioned for such control period or a control period in a prior year.

(ii) A CSAPR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) of this section for a control period in a given year must be a CSAPR SO<sub>2</sub> Group 1 allowance that was allocated or auctioned for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each CSAPR SO<sub>2</sub> Group 1 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with this subpart.

(6) Limited authorization. A CSAPR SO<sub>2</sub> Group 1 allowance is a limited authorization to emit one ton of SO<sub>2</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:

(i) Such authorization shall only be used in accordance with the CSAPR SO<sub>2</sub> Group 1 Trading Program; and

(ii) Notwithstanding any other provision of this subpart, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A CSAPR SO<sub>2</sub> Group 1 allowance does not constitute a property right.

(d) Title V permit requirements. (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR SO<sub>2</sub> Group 1 allowances in accordance with this subpart.

(2) A description of whether a unit is required to monitor and report SO<sub>2</sub> emissions using a continuous emission monitoring system (under subpart B of part 75 of this chapter), an excepted monitoring system (under appendices D and E to part 75 of this chapter), a low mass emissions excepted monitoring methodology (under §75.19 of this chapter), or an alternative monitoring system (under subpart E of part 75 of this chapter) in accordance with §§97.630 through 97.635 may be added to, or changed in, a title V permit using minor permit modification procedures in accordance with §§70.7(e)(2) and 71.7(e)(1) of this chapter, provided that the requirements applicable to the described monitoring and reporting (as added or changed, respectively) are already incorporated in such permit. This paragraph explicitly provides that the addition of, or change to, a unit's description as described in the prior sentence is eligible for minor permit modification procedures in accordance with §§70.7(e)(2)(i)(B) and 71.7(e)(1)(i)(B) of this chapter.

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(e) **Additional recordkeeping and reporting requirements.** (1) Unless otherwise provided, the owners and operators of each CSAPR SO<sub>2</sub> Group 1 source and each CSAPR SO<sub>2</sub> Group 1 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i) The certificate of representation under §97.616 for the designated representative for the source and each CSAPR SO<sub>2</sub> Group 1 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under §97.616 changing the designated representative.

(ii) All emissions monitoring information, in accordance with this subpart.

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR SO<sub>2</sub> Group 1 Trading Program.

(2) The designated representative of a CSAPR SO<sub>2</sub> Group 1 source and each CSAPR SO<sub>2</sub> Group 1 unit at the source shall make all submissions required under the CSAPR SO<sub>2</sub> Group 1 Trading Program, except as provided in §97.618. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in parts 70 and 71 of this chapter.

(f) **Liability.** (1) Any provision of the CSAPR SO<sub>2</sub> Group 1 Trading Program that applies to a CSAPR SO<sub>2</sub> Group 1 source or the designated representative of a CSAPR SO<sub>2</sub> Group 1 source shall also apply to the owners and operators of such source and of the CSAPR SO<sub>2</sub> Group 1 units at the source.

(2) Any provision of the CSAPR SO<sub>2</sub> Group 1 Trading Program that applies to a CSAPR SO<sub>2</sub> Group 1 unit or the designated representative of a CSAPR SO<sub>2</sub> Group 1 unit shall also apply to the owners and operators of such unit.

(g) **Effect on other authorities.** No provision of the CSAPR SO<sub>2</sub> Group 1 Trading Program or exemption under §97.605 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR SO<sub>2</sub> Group 1 source or CSAPR SO<sub>2</sub> Group 1 unit from compliance with any other provision of the applicable, approved

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State implementation plan, a federally enforceable permit, or the Clean Air Act.”

**C.40 CFR Part 97 Subpart GGGGG - CSAPR NO<sub>x</sub> Ozone Season Group 3 Trading Program**

**§97.1006 Standard requirements.**

(a) **Designated representative requirements.** The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with §§97.1013 through 97.1018.

(b) **Emissions monitoring, reporting, and recordkeeping requirements.**

(1) The owners and operators, and the designated representative, of each CSAPR NO<sub>x</sub> Ozone Season Group 3 source and each CSAPR NO<sub>x</sub> Ozone Season Group 3 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of §§97.1030 through 97.1035.

(2) The emissions data determined in accordance with §§97.1030 through 97.1035 shall be used to calculate allocations of CSAPR NO<sub>x</sub> Ozone Season Group 3 allowances under §§97.1011(a)(2) and (b) and 97.1012 and to determine compliance with the CSAPR NO<sub>x</sub> Ozone Season Group 3 emissions limitation and assurance provisions under paragraph (c) of this section, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with §§97.1030 through 97.1035 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) **NO<sub>x</sub> emissions requirements -**

(1) **CSAPR NO<sub>x</sub> Ozone Season Group 3 emissions limitation.**

(i) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO<sub>x</sub> Ozone Season Group 3 source and each CSAPR NO<sub>x</sub> Ozone Season Group 3 unit at the source shall hold, in the source's compliance account, CSAPR NO<sub>x</sub> Ozone Season Group 3 allowances available for deduction for such control period under §97.1024(a) in an amount not less than the tons of total NO<sub>x</sub> emissions for such control period from all CSAPR NO<sub>x</sub> Ozone Season Group 3 units at the source.

(ii) If total NO<sub>x</sub> emissions during a control period in a given year from the CSAPR NO<sub>x</sub> Ozone Season Group 3 units at a CSAPR NO<sub>x</sub> Ozone Season Group 3 source are in excess of the CSAPR NO<sub>x</sub> Ozone Season

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	<p>Group 3 emissions limitation set forth in paragraph (c)(1)(i) of this section, then:</p> <p>(A) The owners and operators of the source and each CSAPR NO<sub>x</sub> Ozone Season Group 3 unit at the source shall hold the CSAPR NO<sub>x</sub> Ozone Season Group 3 allowances required for deduction under §97.1024(d); and</p> <p>(B) The owners and operators of the source and each CSAPR NO<sub>x</sub> Ozone Season Group 3 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of this subpart and the Clean Air Act.</p> <p>(2) <u>CSAPR NO<sub>x</sub> Ozone Season Group 3 assurance provisions.</u></p> <p>(i) If total NO<sub>x</sub> emissions during a control period in a given year from all base CSAPR NO<sub>x</sub> Ozone Season Group 3 units at base CSAPR NO<sub>x</sub> Ozone Season Group 3 sources in a State (and Indian country within the borders of such State) exceed the State assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO<sub>x</sub> emissions during such control period exceeds the common designated representative's assurance level for the State and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NO<sub>x</sub> Ozone Season Group 3 allowances available for deduction for such control period under §97.1025(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with §97.1025(b), of multiplying -</p> <p>(A) The quotient of the amount by which the common designated representative's share of such NO<sub>x</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the State (and Indian country within the borders of such State) for such control period, by which each common designated representative's share of such NO<sub>x</sub> emissions exceeds the respective common designated representative's assurance level; and</p> <p>(B) The amount by which total NO<sub>x</sub> emissions from all base CSAPR NO<sub>x</sub> Ozone Season Group 3 units at base CSAPR NO<sub>x</sub> Ozone Season Group 3 sources in the State (and Indian country within the borders of such State) for such control period exceed the State assurance level.</p> <p>(ii) The owners and operators shall hold the CSAPR NO<sub>x</sub> Ozone Season Group 3 allowances required under paragraph (c)(2)(i) of this section, as</p>

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of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after the year of such control period.

(iii) Total NO<sub>x</sub> emissions from all base CSAPR NO<sub>x</sub> Ozone Season Group 3 units at base CSAPR NO<sub>x</sub> Ozone Season Group 3 sources in a State (and Indian country within the borders of such State) during a control period in a given year exceed the State assurance level if such total NO<sub>x</sub> emissions exceed the sum, for such control period, of the State NO<sub>x</sub> Ozone Season Group 3 trading budget under §97.1010(a), the State's variability limit under §97.1010(b), and, for the control period in 2021 only, the product (rounded to the nearest allowance) of 1.21 multiplied by the supplemental amount of CSAPR NO<sub>x</sub> Ozone Season Group 3 allowances determined for the State under §97.1010(d).

(iv) It shall not be a violation of this subpart or of the Clean Air Act if total NO<sub>x</sub> emissions from all base CSAPR NO<sub>x</sub> Ozone Season Group 3 units at base CSAPR NO<sub>x</sub> Ozone Season Group 3 sources in a State (and Indian country within the borders of such State) during a control period exceed the State assurance level or if a common designated representative's share of total NO<sub>x</sub> emissions from the base CSAPR NO<sub>x</sub> Ozone Season Group 3 units at base CSAPR NO<sub>x</sub> Ozone Season Group 3 sources in a State (and Indian country within the borders of such State) during a control period exceeds the common designated representative's assurance level.

(v) To the extent the owners and operators fail to hold CSAPR NO<sub>x</sub> Ozone Season Group 3 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) of this section:

(A) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B) Each CSAPR NO<sub>x</sub> Ozone Season Group 3 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) of this section and each day of such control period shall constitute a separate violation of this subpart and the Clean Air Act.

(3) Compliance periods.

(i) A CSAPR NO<sub>x</sub> Ozone Season Group 3 unit shall be subject to the requirements under paragraph (c)(1) of this section for the control period starting on the later of May 1, 2021, or the deadline for meeting the unit's monitor certification requirements under §97.1030(b) and for each control period thereafter.

(ii) A base CSAPR NO<sub>x</sub> Ozone Season Group 3 unit shall be subject to the requirements under paragraph (c)(2) of this section for the control period starting on the later of May 1, 2021, or the deadline for meeting

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the unit's monitor certification requirements under §97.1030(b) and for each control period thereafter.

(4) Vintage of CSAPR NO<sub>x</sub> Ozone Season Group 3 allowances held for compliance.

(i) A CSAPR NO<sub>x</sub> Ozone Season Group 3 allowance held for compliance with the requirements under paragraph (c)(1)(i) of this section for a control period in a given year must be a CSAPR NO<sub>x</sub> Ozone Season Group 3 allowance that was allocated or auctioned for such control period or a control period in a prior year.

(ii) A CSAPR NO<sub>x</sub> Ozone Season Group 3 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (c)(2)(i) through (iii) of this section for a control period in a given year must be a CSAPR NO<sub>x</sub> Ozone Season Group 3 allowance that was allocated or auctioned for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each CSAPR NO<sub>x</sub> Ozone Season Group 3 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with this subpart.

(6) Limited authorization. A CSAPR NO<sub>x</sub> Ozone Season Group 3 allowance is a limited authorization to emit one ton of NO<sub>x</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:

(i) Such authorization shall only be used in accordance with the CSAPR NO<sub>x</sub> Ozone Season Group 3 Trading Program; and

(ii) Notwithstanding any other provision of this subpart, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A CSAPR NO<sub>x</sub> Ozone Season Group 3 allowance does not constitute a property right.

(d) Title V permit requirements.

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO<sub>x</sub> Ozone Season Group 3 allowances in accordance with this subpart.

(2) A description of whether a unit is required to monitor and report NO<sub>x</sub> emissions using a continuous emission monitoring system (under subpart H of part 75 of this chapter), an excepted monitoring system (under appendices D and E to part 75 of this chapter), a low mass emissions excepted monitoring methodology (under §75.19 of this chapter), or an alternative monitoring system (under subpart E of part 75 of this chapter) in accordance with §§97.1030 through 97.1035 may be added to, or

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changed in, a title V permit using minor permit modification procedures in accordance with §§70.7(e)(2) and 71.7(e)(1) of this chapter, provided that the requirements applicable to the described monitoring and reporting (as added or changed, respectively) are already incorporated in such permit. This paragraph explicitly provides that the addition of, or change to, a unit's description as described in the prior sentence is eligible for minor permit modification procedures in accordance with §§70.7(e)(2)(i)(B) and 71.7(e)(1)(i)(B) of this chapter.

**(e) Additional recordkeeping and reporting requirements.**

(1) Unless otherwise provided, the owners and operators of each CSAPR NO<sub>x</sub> Ozone Season Group 3 source and each CSAPR NO<sub>x</sub> Ozone Season Group 3 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i) The certificate of representation under §97.1016 for the designated representative for the source and each CSAPR NO<sub>x</sub> Ozone Season Group 3 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under §97.1016 changing the designated representative.

(ii) All emissions monitoring information, in accordance with this subpart.

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO<sub>x</sub> Ozone Season Group 3 Trading Program.

(2) The designated representative of a CSAPR NO<sub>x</sub> Ozone Season Group 3 source and each CSAPR NO<sub>x</sub> Ozone Season Group 3 unit at the source shall make all submissions required under the CSAPR NO<sub>x</sub> Ozone Season Group 3 Trading Program, except as provided in §97.1018. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in parts 70 and 71 of this chapter.

**(f) Liability.**

(1) Any provision of the CSAPR NO<sub>x</sub> Ozone Season Group 3 Trading Program that applies to a CSAPR NO<sub>x</sub> Ozone Season Group 3 source or the designated representative of a CSAPR NO<sub>x</sub> Ozone Season Group 3

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<b>Table IV–14: Cross State Air Pollution Rule (CSAPR)</b>	
	<p>source shall also apply to the owners and operators of such source and of the CSAPR NO<sub>x</sub> Ozone Season Group 3 units at the source.</p> <p>(2) Any provision of the CSAPR NO<sub>x</sub> Ozone Season Group 3 Trading Program that applies to a CSAPR NO<sub>x</sub> Ozone Season Group 3 unit or the designated representative of a CSAPR NO<sub>x</sub> Ozone Season Group 3 unit shall also apply to the owners and operators of such unit.</p> <p><b>(g) <u>Effect on other authorities.</u></b> No provision of the CSAPR NO<sub>x</sub> Ozone Season Group 3 Trading Program or exemption under §97.1005 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO<sub>x</sub> Ozone Season Group 3 source or CSAPR NO<sub>x</sub> Ozone Season Group 3 unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act.</p>
<b>14.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p><b>A, B &amp; C:</b> See Monitoring Requirements.</p>
<b>14.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p><b>A. 40 CFR Part 97 Subpart AAAAA—CSAPR NO<sub>x</sub> Annual Trading Program</b>          The Permittee shall comply with the monitoring requirements found in §97.406, §97.430, and §97.434 for the NO<sub>x</sub> Annual Trading Program.</p> <p><b>B. 40 CFR Part 97 Subpart CCCCC—CSAPR SO<sub>2</sub> Group 1 Trading Program</b>          The Permittee shall comply with the monitoring requirements found in §97.606, §97.630, §97.631, §97.632, and §97.633.</p> <p>The Permittee operates continuous emission monitoring system (CEMS) pursuant to 40 CFR Part 75, Subpart B (for SO<sub>2</sub> monitoring) and 40 CFR Part 75, Subpart H (for NO<sub>x</sub> monitoring).</p> <p><b>C. 40 CFR Part 97 Subpart GGGGG—CSAPR NO<sub>x</sub> Ozone Season Group 3 Trading Program</b>          The Permittee shall comply with the monitoring requirements found in §97.1006; §97.1030; §97.1031, §97.1032, and §97.1033 for the NO<sub>x</sub> Ozone Season Group 3 Trading Program.</p>



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<b>14.4</b>	<p><b><u>Record Keeping Requirements:</u></b>  <b>Note:</b> All records must be maintained for a period of at least 5 years.  <b>[Reference: COMAR 26.11.03.06C(5)(g)]</b></p> <p><b>A. 40 CFR Part 97 Subpart AAAAA—CSAPR NO<sub>x</sub> Annual Trading Program</b>            The Permittee shall comply with the recordkeeping requirements found in §97.406, §97.430, and §97.434 for the NO<sub>x</sub> Annual Trading Program.</p> <p><b>B. 40 CFR Part 97 Subpart CCCCC—CSAPR SO<sub>2</sub> Group 1 Trading Program</b>            The Permittee shall comply with the recordkeeping requirements found in §97.606, §97.630, and §97.634.</p> <p><b>C. 40 CFR Part 97 Subpart GGGGG—CSAPR NO<sub>x</sub> Ozone Season Group 3 Trading Program</b>            The Permittee shall comply with the recordkeeping requirements found in §97.1006; §97.1030 and §97.1034 for the NO<sub>x</sub> Ozone Season Group 3 Trading Program.</p>
<b>14.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><b>A. 40 CFR Part 97 Subpart AAAAA—CSAPR NO<sub>x</sub> Annual Trading Program</b>            The Permittee shall comply with the reporting requirements found in §97.406, §97.430, §97.433 and §97.434 for the NO<sub>x</sub> Annual Trading Program.</p> <p><b>B. 40 CFR Part 97 Subpart CCCCC—CSAPR SO<sub>2</sub> Group 1 Trading Program</b>            The Permittee shall comply with the reporting requirements found in §97.606, §97.630, §97.633 and §97.634.</p> <p><b>C. 40 CFR Part 97 Subpart GGGGG—CSAPR NO<sub>x</sub> Ozone Season Group 3 Trading Program</b>            The Permittee shall comply with the reporting requirements found in §97.1006; §97.1030 and §97.1034 for the NO<sub>x</sub> Ozone Season Group 3 Trading Program.</p>

**“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”**

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**SECTION V      INSIGNIFICANT ACTIVITIES**

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

- (1) No.   4   Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;

The affected units are subject to the following requirements:

- (A) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.
- (B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.
- (C) Exceptions:
  - (i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.
  - (ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
    - (a) Engines that are idled continuously when not in service: 30 minutes
    - (b) all other engines: 15 minutes.
  - (iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

- (2)   ✓   Water cooling towers and water-cooling ponds unless used for evaporative cooling of water from barometric jets or

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barometric condensers, or used in conjunction with an installation requiring a permit to operate;

- (3) No. 2 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The *affected units* are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

- (a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;
- (b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;
- (c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

- (a) Monthly records of the total VOC degreasing materials used; and
- (b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.

- (4) Containers, reservoirs, or tanks used exclusively for:

- (a) No. 16 Storage of lubricating oils;

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- (b) No. 13 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
- (c) No. 1 Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;
- (5) ✓ Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;
- (6) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (7) ✓ Laboratory fume hoods and vents;

*For the following, attach additional pages as necessary:*

- (8) any other emissions unit, not listed in this section, with a potential to emit less than the "de minimus" levels listed in COMAR 26.11.02.10X (list and describe units):

No. 2 Sandblasting booth\_\_\_\_\_

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**SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS**

The Permittee is subject to the following State-only enforceable requirements:

Applicable Regulations:

**COMAR 26.11.06.08 – Nuisance.** “An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution.”

**COMAR 26.11.06.09 - Odors.** “A person may not cause or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.”

**Emissions Unit Number(s): FSC-BS-Unit1 and FSC-BS-Unit2**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the flyash separation equipment on site. The reburning of flyash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC).

Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse, and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**Applicable Standards/Limits:**

**PM CEMS Consent Agreement signed April 19, 2016.**

1. Raven Power shall maintain and operate a Particulate Matter Continuous Emissions Monitoring System (“PM CEMS”) downstream of all pollution control devices to record particulate emissions in the flue gas exiting the stacks of Brandon Shores Units 1 and 2 at all times when Units 1 or 2 are operating. Raven Power shall use all reasonable efforts to keep the PM CEMS continuously operating and producing data whenever the Unit served by the

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applicable PM CEMS is operating, such that the PM CEMS obtains valid hourly averages for a minimum of ninety-five (95) percent of all Units operating hours in a calendar quarter. If in any calendar quarter the valid PM CEMS data is less than ninety-five (95) percent, Raven Power shall submit a report to the Department within thirty (30) days of the end of the quarter which shall include:

a. The reason for the monitoring downtime; and  
b. All corrective actions identified to improve valid PM CEMS data collection to at least ninety-five (95) percent of all Unit operating hours. The report shall identify which corrective actions have been implemented and shall include a completion schedule for any corrective actions which have not yet been implemented.

2. Notwithstanding any other provision of this Consent Agreement, up to a total of 24 operating hours of invalid data during any calendar quarter shall not be considered a failure to comply with this Consent Agreement unless Brandon Shores failed to use reasonable efforts to operate the PM CEMS on that Unit during the periods of downtime.

3. Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter concentration in grains per dry gas standard cubic feet on a 24-hour rolling average basis, unless State or federal law or regulations require a different averaging period or different procedures, in which case, Raven Power shall be subject to applicable state or federal requirements.

4. Raven Power shall calibrate and operate both PM CEMS in accordance with the Quality Assurance/Quality Control ("QA/QC") protocol previously submitted to and approved by the Department pursuant to the Consent Decree and developed in accordance with 40 CFR Part 60. The QA/QC protocol may be revised as agreed in writing by Raven Power and the Department.

5. PM CEMS data shall be used to demonstrate compliance with applicable particulate matter emissions limitations for Brandon Shores Units 1 and 2. Raven Power shall submit quarterly PM CEMS reports to the Department that comply with COMAR 26.11.01.11E. All data shall be reported in 24-hour rolling averages.

6. Raven Power shall maintain, in an electronic database, the average emission values recorded by each PM CEMS.

7. Raven Power agrees not to contest the inclusion and incorporation of continuing obligations of this Consent Agreement into future Title V operating permits applicable to the Brandon Shores electric generating station.

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**Emissions Unit Number(s): FSC-BS-Unit1 and FSC-BS-Unit2 & FSC-HAW-Unit3**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the flyash separation equipment on site. The reburning of flyash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC).

Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse, and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. **[MDE Reg. No. 3-0003]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**Applicable Standards/Limits:**

**COMAR 26.11.01.04 - Testing and Monitoring.**

**"A. Requirements for Testing.**

(1) The Department may require any person to conduct or have conducted testing to determine compliance with this subtitle. The Department, at its option, may witness or conduct these tests. This testing will be done at a reasonable time, and all information gathered during a testing operation will be provided to both parties."

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**Regional Haze Consent Order July 6, 2021**

**FSC-HAW-Unit1:** H.A. Wagner Unit 1 is a residual oil or natural gas fired unit [MDE Reg. No. 5-0469]

**FSC-HAW-Unit2:** H.A. Wagner Unit2 is a natural gas fired unit. [MDE Reg. No. 3-0017] (*modified in 2020-fuel switch from coal fired to natural gas fired*)

**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. [MDE Reg. No. 3-0003] (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**FSC-HAW-Unit4:** H.A. Wagner Unit 4 is a residual oil-fired unit with natural gas fired used for start-up. [MDE Reg. No. 4-0017]

**Applicable Standards/Limits:**

“By and through the Consent Order, Raven Power shall permanently cease the combustion of coal at the H.A. Wagner generating station by no later than January 1, 2026. This Paragraph is intended to neither prevent nor guarantee the netting/crediting of any emissions decreases associated with the permanent cessation of coal burning activities when determining the applicability of Prevention of Significant Deterioration or Nonattainment New Source Review permitting requirements, or other netting/crediting which may be permissible under Code of Maryland Regulations Title 20 or Title 26, in the event of the future addition of emissions units at the generating station, or any other potential modifications; and the enforceable obligations to permanently cease coal burning at the H. A. Wagner generating station established by this Paragraph shall be construed consistent with that intent.” [Reference: **Regional Haze Consent Order July 6, 2021**]

**Emissions Unit Number(s): FSC-BS-Unit1 and FSC-BS-Unit2 & FSC-HAW-Unit1, FSC-HAW-Unit3 and FSC-HAW-Unit4**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered



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from the flyash separation equipment on site. The reburning of flyash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC).

Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse, and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**FSC-HAW-Unit1:** H.A. Wagner Unit 1 is a residual oil or natural gas fired unit **[MDE Reg. No. 5-0469]**

**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. **[MDE Reg. No. 3-0003]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*).

**FSC-HAW-Unit4:** H.A. Wagner Unit 4 is a residual oil-fired unit with natural gas fired used for start-up. **[MDE Reg. No. 4-0017]**

**Applicable Standards/Limits:**

**For FSC-BS-Unit1 and FSC-BS-Unit2:**

**COMAR 26.11.09.05 – Visible Emissions**

“C. Fuel Burning Equipment Subject to Federal COM Requirements. Except for owners or operators of fuel burning equipment subject to any federal requirement that mandates operation of a COM and as provided in §D of this regulation, the owner or operator of fuel burning equipment required to install and operate a COM may discontinue the operation of the COM on fuel burning equipment that is served by a flue gas desulfurization device:

- (1) When emissions from the equipment do not bypass the flue gas desulfurization device serving the equipment;
- (2) When the flue gas desulfurization device serving the equipment is in operation;
- (3) If the owner or operator has demonstrated to the Department's satisfaction, in accordance with 40 CFR §75.14, as amended, and all other applicable State and federal requirements, that water vapor is present in the flue gas from the equipment and would impede the accuracy of opacity measurements; and
- (4) If the owner or operator has fully implemented an alternative plan, approved by the Department, for monitoring opacity levels and particulate matter emissions from the stack that includes:

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- (a) A schedule for monthly observations of visible emissions from the stack by a person trained to perform Method 9 observations; and
- (b) Installation and operation of a particulate matter CEM that complies with all applicable State and federal requirements for particulate matter CEMs.”

“D. If, for units equipped with a flue gas desulfurization device, emissions bypass the device and are discharged through a bypass stack, the bypass stack shall be equipped with a COM approved by the Department.”

**For FSC-HAW-Unit1, FSC-HAW-Unit3 and FSC-HAW-Unit4**

**COMAR 26.1.09.05A(4): Fuel Burning Equipment Required to Operate a COM.** The owner or operator of fuel burning equipment that is subject to the requirement to install and operate a COM shall demonstrate compliance with the applicable visible emissions limitation specified in §A(1) and (2) of this regulation as follows:

- (a) For units with a capacity factor greater than 25 percent, until December 31, 2009, compliance is achieved if visible emissions do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4 percent of the unit’s operating time in any calendar quarter, during which time visible emissions:
  - (i) Do not exceed 40.0 percent opacity, except for 5.0 hours or 0.5 percent of the unit’s operating time, whichever is greater;
  - (ii) Do not exceed 70.0 percent opacity for more than four (4) 6-minute periods, except that coal-fired units equipped with electrostatic precipitators may exceed 70.0 percent opacity for no more than 2.2 hours; and
  - (iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than 1.4 hours and do not exceed 70.0 percent opacity for more than two (2) six-minute periods;
- (b) For units with a capacity factor greater than 25 percent, beginning January 1, 2010, compliance is achieved if visible emissions do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 2 percent of the unit’s operating time in any calendar quarter, during which time visible emissions:
  - (i) Do not exceed 40.0 percent opacity, except for 5.0 hours or 0.5 percent of the unit’s operating time, whichever is greater;
  - (ii) Do not exceed 70.0 percent opacity for more than four (4) six-minute periods, except that coal-fired units equipped with electrostatic precipitators may exceed 70.0 percent opacity for no more than 2.2 hours; and
  - (iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than

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1.4 hours and do not exceed 70.0 percent opacity for more than two 6-minute periods;

(c) For units with a capacity factor equal to or less than 25 percent that operate more than 300 hours per quarter, beginning July 1, 2009, compliance with the applicable visible emissions limitation in §A(1) and (2) of this regulation is achieved if, during a calendar quarter, visible emissions do not exceed the applicable standard for more than 20.0 hours, during which time visible emissions:

(i) Do not exceed 40.0 percent opacity for more than 2.2 hours;

(ii) Do not exceed 70 percent for more than four 6-minute periods; and

(iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than 1.4 hours and do not exceed 70.0 percent opacity for more than two 6-minute periods; and

(d) For units with a capacity factor equal to or less than 25 percent that operate less than 300 hours per quarter, beginning July 1, 2009, compliance with the applicable visible emissions limitation in §A(1) and (2) of this regulation is achieved if, during a calendar quarter, visible emissions do not exceed the applicable standard for more than 12.0 hours, during which time visible emissions:

(i) Do not exceed 40.0 percent opacity for more than 2.2 hours;

(ii) Do not exceed 70.0 percent opacity for more than four 6-minute periods; and

(iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than 1.4 hours and do not exceed 70.0 percent opacity for more than two 6-minute periods.

**COMAR 26.11.09.05B. Determining Violations.**

(1) For each unit required to operate a COM pursuant to COMAR 26.11.01.10A(1)(a) and (b), each day during a calendar quarter when the opacity of emissions from that unit during the calendar quarter or calendar day, as applicable, exceeds the emission limitations in §A(4)(a), (b), (c) and (d) of this regulation shall constitute a separate day of violation.

(2) A violation of §A(4)(a)(i), (ii), or (iii), §A(4)(b)(i), (ii) or (iii), §A(4)(c)(i), (ii) or (iii), or §A(4)(d)(i), (ii) or (iii), of this regulation, as applicable, that occur on the same day shall constitute separate violations.

(3) A daily violation that occurs during the same calendar quarter as a quarterly violation is a separate violation.

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**Operational Requirement For FSC-HAW-Unit1 and FSC-HAW-Unit4**

Note: Requirement applies when burning used oil for energy recovery:

(1) The Permittee shall determine that used oil that is to be burned for energy recovery meets the fuel specifications of COMAR 26.11.09.10B. by performing analyses or obtaining copies of analyses or other information documenting that the used oil fuel meets the specifications.

(2) The Permittee shall keep copies of analyses of the used oil (or other information used to make the determination) for three years.

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**SO<sub>2</sub> Consent Agreement dated December 4, 2019**

**Emissions Unit Number(s): FSC-BS-Unit1 and FSC-BS-Unit2; FSC-HAW-Unit1, FSC-HAW-Unit2, FSC-HAW-Unit3 and FSC-HAW-Unit4**

**FSC-BS-Unit1 (BS1) and FSC-BS-Unit2 (BS2):** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site. The reburning of fly ash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC).

Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse, and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*)

**FSC-HAW-Unit1 (W1):** H.A. Wagner Unit1 is a residual oil or natural gas fired unit **[MDE Reg. No. 5-0469]**

**FSC-HAW-Unit2 (W2):** H.A. Wagner Unit2 is a natural gas fired unit. **[MDE Reg. No. 3-0017]** (*modified in 2020-fuel switch from coal fired to natural gas fired*)

**FSC-HAW-Unit3 (W3):** H.A. Wagner Unit3 is a coal fired unit with natural gas used for start-up. **[MDE Reg. No. 3-0003]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*)

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**FSC-HAW-Unit4 (W4):** H.A. Wagner Unit4 is a residual oil-fired unit with natural gas fired used for start-up. [MDE Reg. No. 4-0017]

**Applicable Requirements**

1. Beginning January 1, 2021, at all times when Unit BS1 and/or BS2 at the Brandon Shores generating station (whether operating individually or in tandem) and Unit W3 at the H.A. Wagner generating station are simultaneously operating, the following SO<sub>2</sub> emissions limits shall apply:
  - a. Units BS1, BS2, and W3 shall not exceed a cumulative SO<sub>2</sub> emissions limit of 3,860 pounds per hour, as measured on a 30-day rolling average, including only those hours when the applicable units are operating; and
  - b. Units BS1 and BS2 (operating either individually or in tandem) shall not exceed a cumulative total of 435 hours per calendar year when the applicable units are operating at a combined SO<sub>2</sub> emissions rate greater than 2,851 pounds per hour.
2. Beginning January 1, 2021, at all times when operating, Unit BS1 and BS2 at the Brandon Shores generating station (whether operating individually or in tandem) shall not exceed a combined SO<sub>2</sub> emissions limit of 3,860 pounds per hour, as measured on a 30-day rolling average.
3. Beginning January 1, 2021, at all times when operating, Unit BS1 and BS2 at the Brandon Shores generating station (whether operating individually or in tandem) shall not exceed a combined SO<sub>2</sub> emissions limit of 9,980 pounds per hour, as measured on a rolling three-hour average.
4. Beginning January 1, 2021, at all times when Unit W3 at the H.A. Wagner generating station is not operating, Unit BS1 and BS2 at the Brandon Shores generating station (whether operating individually or in tandem) shall not exceed a combined SO<sub>2</sub> emissions limit of 5,150 pounds per hour, as measured on a 1-hour average, on more than three hours per calendar year.
5. Beginning January 1, 2021, at all times when operating, Unit W1 at the H.A. Wagner generating station shall not exceed an SO<sub>2</sub> emissions limit of 480 pounds per hour, as measured on a one-hour average.
6. Beginning January 1, 2021, at all times when operating, Unit W1 at the H.A. Wagner generating station shall not exceed 438 hours of operation per calendar year when burning fuel oil.
7. No later than July 1, 2020, Unit W2 at the H.A. Wagner generating station shall permanently cease burning coal and shall only burn natural gas.
8. Beginning January 1, 2021, at all times when operating, Unit W3 at the H.A. Wagner generating station shall not exceed an SO<sub>2</sub> emissions limit of 1,904 pounds per hour, as measured on a 30-day rolling average.

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9. Beginning January 1, 2021, at all times when operating, Unit W3 at the H.A. Wagner generating station shall not exceed a maximum rate of 3,289 pounds SO<sub>2</sub> per hour, as measured on a one-hour average.

10. Beginning January 1, 2021, at all times when operating, Unit W3 at the H.A. Wagner generating station shall not exceed a cumulative total of 336 hours per calendar year when the Unit's SO<sub>2</sub> emissions rate is greater than 2,299 pounds per hour, as measured on a one-hour average.

11. Beginning January 1, 2021, at all times when operating, Unit W4 at the H.A. Wagner generating station shall not exceed an SO<sub>2</sub> emissions limit of 1,350 pounds per hour, as measured on a one-hour average.

12. Beginning January 1, 2021, at all times when operating, Unit W4 at the H.A. Wagner generating station shall not exceed 438 hours of operation per calendar year when burning fuel oil.

**Testing Requirements:** See Monitoring Requirements

**Monitoring Requirements:**

14. For the purposes of Paragraphs 1-12, which require the calculation of emissions rates, an emissions rate shall be calculated as the sum of the SO<sub>2</sub> hourly emissions (lbs.) of all the applicable units during the applicable period, divided by the sum of the operating hours during the applicable period. "Operating hour" is defined as any hour or portion of an hour that a unit combusts fossil fuel.

**Recording Requirements:** See Reporting Requirements

**Reporting Requirements.**

13. Raven Power will demonstrate compliance with the limitations of Paragraphs 1 through 12 through quarterly reports utilizing calculation methodologies, continuous emissions monitoring system (CEMS) availability requirements, and a report format approved by the Department. Raven Power shall submit the proposed methodologies, CEMS availability requirements, and report format within 6 months of the effective date of this consent order for approval by the Department. Raven Power shall submit each quarterly report within 30 days of the end of the applicable quarter.

15. Raven Power shall comply with the following contingency measures, which are a required component of the nonattainment SIP revision pursuant to Section 172(c)(9) of the Clean Air Act.

16. At any time that emissions from BS1, BS2, and/or W3 at the Fort Smallwood Complex exceed one or more of the SO<sub>2</sub> emissions limits or fuel oil operations limits identified in Paragraphs 1 through 12 of this Consent Order, Raven Power shall, with 48 hours of such exceedance, undertake a full-system

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audit of Units BS1 , BS2, W1 , W2, W3, and W4 (cumulatively) at the Fort Smallwood Complex and shall submit a telephone report on the next business day and a written report to the Department within 10 days of the exceedance. At any time that emissions from Units W1, W2, and/or W4 at the Fort Smallwood Complex exceed one or more of the SO<sub>2</sub> emissions limits or fuel oil operations limits identified in Paragraphs 1 through 12 of this Consent Order, Raven Power shall, within 48 hours of knowledge of fuel test results, undertake a full-system audit of Units BS1, BS2, W1, W2, W3, and W4 (cumulatively) at the Fort Smallwood Complex and shall submit a telephone report on the next business day and a written report to the Department within 10 days of the exceedance. The telephone report shall be submitted pursuant to COMAR 26.11.01.07C. A written report to satisfy this requirement shall include both (1) the results of the full-system audit, and (2) a report of excess emissions prepared pursuant to COMAR 26.11.01.07D and Section 3.4 of the Operating Permit. The full-system audit shall consist of a review of the parameters routinely monitored by the continuous emissions monitoring systems and the digital data acquisition systems installed on the SO<sub>2</sub> generating units and their control devices and programs to determine whether or not the units and their controls were operating in accordance with good engineering practices.

- a. If the units or their controls were not operating in accordance with good engineering practices, then Raven Power shall implement corrective actions to ensure that the limits of this Consent Order are not exceeded.
- b. If the units and controls were operating in accordance with good engineering practice, then Raven Power shall inform the Department as to the reasons for their exceedance of one or more of their SO<sub>2</sub> emissions limits and implement corrective actions to ensure that the limits of this Consent Order are not exceeded.
- c. In any case of an exceedance of an SO<sub>2</sub> emission limit or of a fuel oil operations limit, Raven Power shall document and notify the Department of the corrective actions that they have taken.
- d. The audit, report of excess emissions, documentation of corrective actions taken, and associated records shall be maintained on site for five years.

17. If the Essex, Maryland monitor (AIRS ID 24-005-3001) or any other Department-approved air quality SO<sub>2</sub> monitor located within the SO<sub>2</sub> Nonattainment Area, measures a 1-hour SO<sub>2</sub> concentration exceeding 75 parts per billion (i.e., an exceedance of the 1-hour SO<sub>2</sub> NAAQS), then the Department will notify Raven Power within 5 business days both verbally and in writing. If, however, Raven Power first notifies the Department both verbally and in writing of the monitored exceedance, then the Department will not also notify Raven Power.

In either case, whether it is the Department or Raven Power who first notifies the other party of the monitor 's exceedance of the 75 parts per billion SO<sub>2</sub> limit, within 2 business days of that first notification, Raven Power shall notify

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the Department whether Units BS1, BS2, W1, W2, W3, and W4 were running at the time of the exceedance or within 24 hours preceding the exceedance. If any of those Units were running during that timeframe, Raven Power shall analyze the meteorological data on the day the 1-hour exceedance occurred to determine the extent the Fort Smallwood SO<sub>2</sub> emissions contributed to the 1-hour exceedance. The meteorological data analysis shall include: (1) trajectories run at three different heights (one at stack height; and two more within the boundary layer) by the National Oceanic and Atmospheric Administration's Hysplit program or an equivalent program; and (2) an analysis of meteorological data including the Baltimore-Washington International Airport's meteorological data and modeled upper air data using the National Weather Service's Bufkit or an equivalent program. Raven Power shall submit its meteorological data analysis, and its findings there from, to the Department within 30 days of written notification of the exceedance of the 1-hour SO<sub>2</sub> NAAQS.

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### **Healthy Air Act Requirements**

These regulations became effective under an Emergency Action on January 18, 2007, and were adopted as permanent regulations on June 17, 2007. They implement the requirements of the Healthy Air Act (Ch. 23, Acts of 2006), which was signed into law on April 6, 2006, and which established emission limitations and related requirements for NO<sub>x</sub>, SO<sub>2</sub> and mercury. Regulations .1-.03, .03E, .05 and .06 related to the reductions of NO<sub>x</sub>, and SO<sub>2</sub> emissions were submitted to EPA as a revision to Maryland's State Implementation Plan (SIP) on June 12, 2007. The requirements for NO<sub>x</sub>, and SO<sub>2</sub> emissions, all except for one were approved by EPA, as a SIP revision on September 4, 2008, with an effective date of October 6, 2008. The requirements for mercury emissions are not part of the Maryland's SIP and are therefore, part of the State-Only Section.

### **Emissions Unit Number(s): FSC-BS-Unit1 and FSC-BS-Unit2; and FSC-HAW-Unit3**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the flyash separation equipment on site. The reburning of flyash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC).

Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon



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(PAC) injection system, a baghouse, and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*)

**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. **[MDE Reg. No. 3-0003]**  
(*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*)

**Applicable Regulations:**

**COMAR 26.11.27 - Emission Limitations for Power Plant**

**COMAR 26.11.27.03 – General Requirements**

A. An electric generating unit subject to this chapter shall comply with the emission limitations for NO<sub>x</sub>, SO<sub>2</sub>, and mercury as provided in this regulation.

B. NO<sub>x</sub> Emission Limitations.

Healthy Air Act State-Only enforceable NO<sub>x</sub> requirement

**COMAR 26.11.27.03B(7)(iii)** – “Not later than December 31 of the year in which the emission limitation is exceeded, the owner or operator of the affected generating unit or units transfers to the Maryland Environmental Surrender Account, ozone season NO<sub>x</sub> allowances equivalent in number to the tons of NO<sub>x</sub> emitted in excess of the emission limitation in §B(4) or (6), as applicable”.

**COMAR 26.11.27.03D. Mercury Emission Limitations.**

(1) For the 12 months beginning January 1, 2010, and ending with the 12 months beginning December 1, 2012, to December 1, 2013, each affected facility shall meet 12-month rolling average removal efficiency for mercury of at least 80 percent.

(2) For the 12 months beginning January 1, 2013, and thereafter, each affected facility shall meet 12-month rolling average removal efficiency for mercury of at least 90 percent.

(3) The mercury removal efficiency required in §D(1) and (2) of this regulation shall be determined in accordance with Regulation .04 of this chapter.

**COMAR 26.11.27.04 - Determining the Mercury Removal Efficiency for Affected Facilities.**

A. The procedures of §§B—F of this regulation shall be used to demonstrate compliance with the 12-month rolling average removal efficiency required for mercury by Regulation .03D of this chapter. The owner or operator of an affected facility shall notify the Department of the compliance demonstration

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method it has elected from §§D—F of this regulation on or before January 1, 2010, for the compliance period that commences on that date and on or before January 1, 2013, for the compliance period that commences on that date. The owner or operator of an electric generating unit that elects to demonstrate compliance with the required mercury removal efficiency by meeting the mass emissions limitation in §F of this regulation shall utilize that same method for all other electric generating units in the system. Once elected for each affected facility or system, as applicable, the option may not be changed during the designated compliance period but may be changed for the next compliance period.

**Note:** Fort Smallwood Complex selected demonstrating compliance by Meeting a Mercury Mass Emission Cap COMAR 26.11.27.04F(1) and (2) per letter signed by Edwin Much to Ralph Hall dated December 7,2009.

**F. Demonstrating Compliance by Meeting a Mercury Mass Emission Cap.**

(1) Compliance with the required mercury removal efficiency is demonstrated at an affected facility when the mass emissions from all affected facilities in a system, measured in pounds as a 12-month rolling average, do not exceed the applicable emission limits in §F(2) of this regulation.

(2) Mercury Emission Limits.

Affected Facility	Emission Limits Pounds per Year Beginning
	January 1, 2013
Brandon Shores	46
Wagner	33

(3) In the event that an electric generating unit at an affected facility subject to this chapter permanently ceases operation, the mass emission limitation in §F(2) of this regulation which is applicable to that affected facility shall be reduced proportionally based on the relative capacity, in megawatts, of all the electric generating units at the affected facility which are subject to this regulation.

(4) In the event that an entire affected facility within a system permanently ceases operation, the total mass emission limitation in §F(2) which is applicable to the system shall be reduced by the mass emission limitation applicable to the affected facility.

(5) Except during periods of startup, shutdown, malfunction or maintenance, the owner or operator of an electric generating unit shall ensure that mercury

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control measures are continuously employed on each unit and properly adjusted for optimal control taking into consideration the operating conditions.

**COMAR 26.11.27.05 - Monitoring and Reporting Requirements.**

**A.** Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.

**COMAR 26.11.27.05 - Monitoring and Reporting Requirements.**

**B.** Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.

**C.** Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department.

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**Emissions Unit Number(s): FSC-BS-MH and FSC-HAW-MH**

**FSC-BS-MH**

The Brandon Shores material handling system consists of various equipment and processes to transport coal, fly ash, hydrated lime or equivalent, powdered activated carbon and other materials. There are facilities to mix coal with additives to reduce stack emissions. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment. **(MDE Reg. No. 6-1143)**

**FSC-HAW-MH**

The H.A. Wagner material handling system consists of various equipment and processes to transport coal, fly ash, hydrated lime or equivalent, powdered activated carbon and other materials. There are facilities to mix coal with additives to reduce stack emissions. Equipment and processes may include unloading scoops, transfer point, storage piles, silos, bin vents, and other material handling equipment. **(MDE Reg. No. 6-1144)**

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**Applicable Regulations:**

**Management of Coal Combustion Byproducts (COMAR 26.04.10)**

**COMAR 26.04.10.03 - General Restrictions and Specifically Prohibited Acts.**

**COMAR 26.04.10.03B(3) - Air Pollution**

“A person may not engage in the disposal, storage, transportation, processing, handling, or use of coal combustion byproducts without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, when appropriate as determined by the Department, those precautions described in COMAR 26.11.06.03C and D.”

**COMAR 26.04.10.03B(4) - Transportation**

“In addition to the requirements of §B(3) of this regulation, a person may not transport coal combustion byproducts without taking reasonable precautions to control fugitive air emissions relating to the transportation. These reasonable precautions shall include, at a minimum, the following:

(a) Vehicles transporting coal combustion byproducts shall be fully enclosed, or fully enclosed on all sides and covered with a firmly secured canvas or other covering, so as to prevent any coal combustion byproducts from blowing off, falling off, or spilling out of the vehicle, or the coal combustion byproducts shall be handled and transported in sealed containers designed for transportation of powdery solids;

(b) Before leaving a site where coal combustion byproducts are loaded or off-loaded, vehicles transporting coal combustion byproducts shall be rendered clean and free of excess material or debris that could blow off, fall off, or spill during transportation;

(c) Coal combustion byproducts being loaded into or off-loaded from a vehicle shall be sufficiently moistened or otherwise conditioned or contained to prevent particulate coal combustion byproducts from becoming airborne or causing fugitive air emissions;

(d) Following loading but prior to any transportation of coal combustion byproducts, the transporter shall inspect each vehicle that contains coal combustion byproducts to ensure that the requirements of §B(4) of this regulation are met;

(e) A transporter of coal combustion byproducts shall maintain an inspection log for each vehicle that shall be maintained in the vehicle at all times during transport of coal combustion byproducts, and for 30 days thereafter that shall certify compliance with the standards in §B(4) of this regulation; and

(f) An inspection log maintained by a transporter of coal combustion byproducts shall consist of an entry for each inspection of a vehicle that has been conducted by the transporter. An inspection entry shall consist of the following information:

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- (i) The date the inspection occurred;
- (ii) The time of day the inspection occurred;
- (iii) The name of the person conducting the inspection;
- (iv) The condition of the vehicle and any corrective action required to ensure compliance with this subsection, for example, "truck cleaned and covered" for a vehicle that meets the requirements, or "cover OK, right-side wheels hosed off again" for a vehicle that was properly covered but which required re-cleaning of wheels on the right side; and
- (v) The signature of the individual certifying compliance with §B(4) of this regulation."

**COMAR 26.04.10.05 - Storage.**

A. A person may not store coal combustion byproducts except in accordance with the provisions of this regulation.

B. A person may not store coal combustion byproducts directly on the surface of the ground or in an unlined surface impoundment, pit, pond, or lagoon without the authorization of the Department.

C. A person shall store coal combustion byproducts in a manner that prevents contact with waters of this State and that is designed either to minimize contact with precipitation or to collect leachate that may result from contact with precipitation.

D. A person may not use a storage system for coal combustion byproducts unless the storage system is:

(1) Designed, constructed, and installed to contain coal combustion byproducts and contaminants in the coal combustion byproducts and prevent them from being released to the environment; and

(2) Provided with a roof or other protections to prevent nuisance, air pollution, and unlawful discharges of contaminated stormwater or leachate to the waters of this State.

E. A person may not store coal combustion byproducts in an area likely to pollute the waters of this State.

F. Responsibility for the prompt control, containment, and removal of any released coal combustion byproducts or for placing coal combustion byproducts in a position likely to pollute the waters of this State shall be with the person responsible for the release, and with the owner and operator of the facility, site, or storage system where the release occurred. This responsibility shall continue until removal or cleanup of any contamination or pollution from the release has been accomplished to the satisfaction of the Department.

G. The Department may impose specific requirements for the storage of coal combustion byproducts upon a determination that storage of coal combustion byproducts has caused or is likely to cause a discharge to the waters of the State, is a nuisance, or otherwise poses a threat to public health or the environment.

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H. The owner and operator of a facility, site, or storage system shall ensure that:

- (1) A release of coal combustion byproducts during storage operations due to spilling or overflowing does not occur;
- (2) Adequate storage space is available to handle the volume of coal combustion byproducts generated and to be stored; and
- (3) Transfer, handling, and storage operations are performed in a manner that shall prevent, contain, and clean up spills of coal combustion byproducts.”

**COMAR 26.11.15.05**, which requires that the Permittee implement “Best Available Control Technology for Toxics”

**COMAR 26.11.15.06**, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health

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**Emissions Unit Number(s): FSC-BS-Unit1 and FSC-BS-Unit2 & FSC-HAW-Unit3**

**FSC-BS-Unit1 and FSC-BS-Unit2:** Two (2) solid fossil fuel fired generating units with No.2 oil used for start-up purposes. These Units are also capable of re-burning high carbon fly ash with the solid fuel/coal that has been recovered from the fly ash separation equipment on site. The reburning of fly ash was approved in an August 2011 letter from the Maryland Public Service Commission (PSC).

Emissions from Units 1 and 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse, and a flue gas desulfurization (FGD) system prior to being discharge through a single stack. **[MDE Reg. Nos. 3-0015 & 3-0016]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*)

**FSC-HAW-Unit3:** H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. **[MDE Reg. No. 3-0003]** (*Permit to construct issued in 2022 for fuel switch from solid fossil fuel fired to No. 2 fuel oil fired for both boilers; Modification expected to be completed by Dec 31, 2025*)

**COMAR 26.11.38 – Control of NO<sub>x</sub> Emissions from Coal-Fired Electric Generating Units.**

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**Applicable Regulations:**

**COMAR 26.11.38.02 – Applicability**

“The provisions of this chapter apply to an affected electric generating unit as that term is defined in §.01B of this chapter.”

**COMAR 26.11.38.03 – NO<sub>x</sub> Emission Control Requirements**

**A. Daily NO<sub>x</sub> Reduction Requirements During the Ozone Season**

(1) Not later than 45 days after the effective date of this regulation, the owner or operator of an affected electric generating unit shall submit a plan to the Department and EPA for approval that demonstrated how each affected electric generating unit (“the unit”) will operate installed pollution control technology and combustion controls to meet the requirements of §A(2) of this regulation. The plan shall cover all modes of operation, including but not limited to normal operations, start-up, shut-down and low load operations.

(2) Beginning on May 1, 2015, for each operating day during the ozone season, the owner or operator of an affected electric generating unit shall minimize NO<sub>x</sub> emissions by operating and optimizing the use of all installed pollution control technology and combustion controls consistent with the technological limitations, manufacturers’ specification, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions (as defined in 40 CFR §60.11(d)) for such equipment and the unit at all times the unit is in operation while burning any coal.

**B. Ozone Season NO<sub>x</sub> Reduction Requirements.**

(1) Except as provided in §B(3) of this regulation, the owner or operator of an affected electric generating unit shall not exceed a NO<sub>x</sub> 30-day system-wide rolling average emission rate of 0.15 lbs./MMBtu during the ozone season.

(2) The owner or operator of an affected electric generating unit subject to the provisions of this regulation shall continue to meet ozone season NO<sub>x</sub> reduction requirements in COMAR 26.11.27.

**C. Annual NO<sub>x</sub> Reduction Requirements.**

The owner or operator of an affected electric generating unit subject to the provisions of this regulation shall continue to meet the annual NO<sub>x</sub> reduction requirements in COMAR 26.11.27.

**COMAR 26.11.38.05 – Compliance Demonstration Requirements**

**A. Procedures for Demonstrating Compliance with Regulation .03A of this Chapter.**

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(1) An affected electric generating unit shall demonstrate, to the Department's satisfaction, compliance with Regulation .03A(2) of this chapter, using the information collected and maintained in accordance with Regulation .03A(1) of this chapter and any additional documentation available to and maintained by the affected electric generating unit.

(2) An affected electric generating unit shall not be required to submit a unit-specific report consistent with §A(3) of this regulation when the unit emits at levels that are at or below the following rates:

Affected Unit	24-Hour Block Average NO <sub>x</sub> Emissions in lbs./MMBtu
Brandon Shores	
Unit 1	0.08
Unit 2	
<650 MWg	0.07
≥650 MWg	0.15
H.A. Wagner	
Unit 3	0.07

(3) The owner or operator of an affected electric generating unit subject to Regulation .03A(2) of this chapter shall submit a unit-specific report for each day the unit exceeds its NO<sub>x</sub> emission rate under §A(2) of this regulation, which shall include the following information for the entire operating day:

- (a) Hours of operation for the unit;
- (b) Hourly averages of operating temperature of installed pollution control technology;
- (c) Hourly averages of heat input (MMBtu/hr.);
- (d) Hourly averages of output (MWh);
- (e) Hourly averages of ammonia or urea flow rates;
- (f) Hourly averages of NO<sub>x</sub> emissions data (lbs./MMBtu and tons);
- (g) Malfunction data;
- (h) The technical and operational reason the rate was exceeded, such as:
  - (i) Operator error;
  - (ii) Technical events beyond the control of the owner or operator (e.g., acts of God, malfunctions); or
  - (iii) Dispatch requirements that mandate unplanned operation (e.g., start-ups and shut-downs, idling, and operation at low voltage or low load);
- (i) A written narrative describing any actions taken to reduce emission rates; and
- (j) Other information that the Department determines is necessary to evaluate the data or to ensure that compliance is achieved.

(4) An exceedance of the emissions rate under §A(2) of this regulation as a result of factors including but not limited to start-up, shut-down, days when the



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unit was directed by the electric grid operator to operate at low load or to operate pursuant to any emergency generation operations required by the electric grid operator, including necessary testing for such emergency operations, or which otherwise occurred during operations which are deemed consistent with the unit's technological limitations, manufacturers' specifications, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions, shall not be considered a violation of Regulation .03A(2) of this chapter provided that the provisions of the approved plan as required in Regulation .03A(1) of this chapter are met.

B. Procedures for Demonstrating Compliance with NO<sub>x</sub> Emission Rates under this Chapter.

(1) Compliance with the NO<sub>x</sub> emission rate limitations in Regulations .03B(1) and D(2), .04B(1)(b), B(4), C(1), C(2), C(3), and E(1)(b), and .05A(2) of this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.

(2) For Regulation .03B(1), .04C(1), C(2), and C(3) of this chapter, in order to calculate the 30-day systemwide rolling average emission rates, if 29 system operating days are not available from the current ozone season, system operating days from the previous ozone season shall be used.

(3) For Regulation .04B(1)(b) of this chapter, in order to calculate the 30-day rolling average emission rates, if 29 operating days are not available from the current ozone season, operating days from the previous ozone season shall be used.

**COMAR 26.11.38.06 – Reporting Requirements**

A. Reporting Schedule

(1) Beginning 30 days after the first month of the ozone season following the effective date of this chapter, each affected electric generating unit subject to the requirements of this chapter shall submit a monthly report to the Department detailing the status of compliance with this chapter during the ozone season.

(2) Each subsequent monthly report shall be submitted to the Department not later than 30 days following the end of the calendar month during the ozone season.

B. Monthly Reports During Ozone Season. Monthly reports during the ozone season shall include:

- (1) Daily pass or fail of the NO<sub>x</sub> emission rates of .05A(2) of this chapter;
- (2) The reporting information as required under .05A(3) of this chapter; and
- (3) The 30-day system-wide rolling average emissions rate for each affected electric generating unit to demonstrate compliance with .03B(1), .04C(1), C(2) and C(3) of this chapter, as applicable;

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- (4) For an affected electric generating unit which has selected the compliance option of Regulation .04B(1) of this chapter, beginning June 1, 2020, the 30-day rolling average emission rate calculated in lbs./MMBtu;
- (5) For an affected electric generating unit which has selected the compliance option of Regulation .04B(4) of this chapter, beginning June 1, 2016, the 30-day rolling average emission rate and 30-day systemwide rolling average emission rate calculated in lbs./MMBtu;
- (6) For an affected electric generating unit which has selected the compliance option of Regulation .04B(4) of this chapter, beginning June 1, 2020, data, information, and calculation which demonstrate the systemwide NO<sub>x</sub> emission rate as determined on a 24-hr block or the actual systemwide daily NO<sub>x</sub> emissions in tons for each day during the month; and
- (7) For an affected electric generating unit which has selected the compliance option of Regulation .04E(1)(b) of this chapter, beginning June 1, 2020, data, information, and calculations which demonstrate the systemwide NO<sub>x</sub> emission rate as determined on a 24-hour block average for each day during the month.

**COMAR 26.11.38.06 – Electric System Reliability During Ozone Season**

- A. In the event of emergency operations, a maximum of 12 hours of operations per system per ozone season may be removed from the calculation of the NO<sub>x</sub> limitations in Regulation .04(B)(4) of this chapter from the unit or units responding to the emergency operations provided that:
- (1) Within one business day following the emergency operation, the owner or operator of the affected electric generating unit or units notifies the Manager of the Air Quality Compliance program of the emergency operations taken by the PJM Interconnection; and
  - (2) Within five business days following the emergency operation, the owner or operator of the affected electric generating unit or units provides the Department with the following information:
    - (a) PJM documentation of the emergency event called, and the unit or units requested to operate;
    - (b) Unit or units dispatched for the emergency operation;
    - (c) Number of hours that the unit or units responded to the emergency operation and the consecutive hours that will be used towards the calculation of the NO<sub>x</sub> limitations in §.04B(4) of this chapter; and
    - (d) Other information regarding efforts the owner or operator took to minimize NO<sub>x</sub> emissions in accordance with Regulation .03A(1)

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of this chapter on the day that the emergency operation was called.

- B. Any partial hour in which a unit operated in response to emergency operation under §A of this regulation shall constitute a full hour of operations. “

Record Keeping and Reporting:

The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:

- (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
- (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

Maryland Department of the Environment  
Air and Radiation Administration

# PHASE II ACID RAIN PERMIT

Plant Name:	Brandon Shores		
Affected Units:	Unit1 and 2		
Owners:	Raven Power Fort Smallwood LLC	ORIS Code	0602
Effective Date From:	XXXX, 2022	To:	September 30, 2027

## Contents:

1. Statement of Basis
2. SO<sub>2</sub> and NO<sub>x</sub> requirements for each affected unit.
3. Comments, notes and justifications regarding permit decisions and changes made to permit application forms during the review process, and any additional requirements or conditions.
4. The permit application forms submitted for this source. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the application.

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## 1. Statement of Basis

Statutory and Regulatory Authorities: In accordance with Environmental Article§2-401, Annotated Code of Maryland and Titles IV and V of the Clean Air Act, the Maryland Department of the Environment, Air and Radiation Administration issues this permit pursuant to COMAR 26.11.02 and COMAR 26.11.03.

## Renewal Permit Approval

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George S. Aburn, Jr., Director  
Air and Radiation Administration

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Date of Issue

Plant Name: Brandon Shores

**2. SO<sub>2</sub> and NO<sub>x</sub> Requirements for each affected unit**

Units No. 1 and 2

<b>SO<sub>2</sub> Requirements</b>	
SO <sub>2</sub> Allowances	Raven Power Fort Smallwood LLC will hold allowances for each unit in accordance with 40 CFR 72.9(c)(1).

<b>NO<sub>x</sub> Requirements</b>					
NO <sub>x</sub> Limit-lbs./MMBTU	Year				
	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Unit No. 1	0.46	0.46	0.46	0.46	0.46
Unit No. 2	0.46	0.46	0.46	0.46	0.46

**3. Comments, notes and justifications regarding decisions, and changes made to the permit application forms during the review process:**

1. The SO<sub>2</sub> allowances allocated by the United States Environmental Protection Agency (U S EPA) to the units are listed in Table 2 of 40 CFR Part 73. However, the number of allowances actually held by an affected source’s account may differ from the number allocated by the U.S. EPA.

2. Units No. 1 and 2 are subject to the standard NO<sub>x</sub> emission rate for dry bottom wall-fired coal boilers.

**Renewal Permit Approval**

\_\_\_\_\_  
 George S. Aburn, Jr , Director  
 Air and Radiation Administration

\_\_\_\_\_  
 Date of Issue

Maryland Department of the Environment  
Air and Radiation Administration

# PHASE II ACID RAIN PERMIT

Plant Name:	Herbert A. Wagner		
Affected Units:	Units 1, 2, 3, and 4		
Owners:	Raven Power Fort Smallwood LLC	ORIS Code	1554
Effective Date From:	XXXX, 2022	To:	September 30, 2027

## Contents:

1. Statement of Basis
2. SO<sub>2</sub> and NO<sub>x</sub> requirements for each affected unit.
3. Comments, notes and justifications regarding permit decisions and changes made to permit application forms during the review process, and any additional requirements or conditions.
4. The permit application forms submitted for this source. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the application.

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## 1. Statement of Basis

Statutory and Regulatory Authorities: In accordance with Environmental Article§2-401, Annotated Code of Maryland and Titles IV and V of the Clean Air Act, the Maryland Department of the Environment, Air and Radiation Administration issues this permit pursuant to COMAR 26.11.02 and COMAR 26.11.03.

## Renewal Permit Approval

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George S. Aburn, Jr , Director  
Air and Radiation Administration

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Date of Issue

Plant Name: Herbert A. Wagner

**2. SO<sub>2</sub> and NO<sub>x</sub> Requirements for each affected unit**

Units No. 1, 2, 3, and 4

<b>SO<sub>2</sub> Requirements</b>	
SO <sub>2</sub> Allowances	Raven Power Fort Smallwood LLC will hold allowances for each unit in accordance with 40 CFR 72.9(c)(1).

<b>NO<sub>x</sub> Requirements</b>					
NO <sub>x</sub> Limit- lbs/mmBTU	Year				
	2016	2017	2018	2019	2020
<b>Unit No. 2</b>	<b>0.46</b>	<b>0.46</b>	<b>0.46</b>	<b>0.46</b>	<b>0.46</b>
Unit No. 3	0.68	0.68	0.68	0.68	0.68

**3. Comments, notes and justifications regarding decisions, and changes made to the permit application forms during the review process:**

1. The SO<sub>2</sub> allowances allocated by the United States Environmental Protection Agency (U S EPA) to the units are listed in Table 2 of 40 CFR Part 73. However, the number of allowances actually held by an affected source’s account may differ from the number allocated by the U.S. EPA.

2. **Unit No. 2 is subject to the standard NO<sub>x</sub> emission rate for dry bottom wall-fired coal boilers.** Unit 3 is subject to the standard NO<sub>x</sub> emissions rate for cell burner coal boilers.

**Renewal Permit Approval**

\_\_\_\_\_  
 George S. Aburn, Jr , Director  
 Air and Radiation Administration

\_\_\_\_\_  
 Date of Issue

Maryland Department of the Environment  
Air and Radiation Administration

**CO<sub>2</sub> BUDGET TRADING PROGRAM PERMIT**

<b>Plant Name:</b> Brandon Shores	
<b>Affected Trading Units:</b> 000001 and 000002	
<b>Owner:</b> Raven Power Fort Smallwood LLC	<b>ORIS Code</b> 00602
<b>Effective Date</b> From: XXXX, 2022 To: September 30, 2027	

**Contents:**

1. Statement of Basis
2. Table of Affected Units
3. Standard Requirements.
4. The permit application forms submitted for this source.

1. Statement of Basis

Statutory and Regulatory Authorities: In accordance with Environmental Article §2-401, Annotated Code of Maryland, the Maryland Department of the Environment, Air and Radiation Administration issues this permit pursuant to COMAR 26.09.01 thru COMAR 26.09.04.

**Initial Permit Approval**

\_\_\_\_\_  
Christopher Hoagland, Director  
Air and Radiation Administration

\_\_\_\_\_  
Date of Issue



<b>Brandon Shores Power Plant Raven Power Fort Smallwood LLC</b>	<b>CO<sub>2</sub> Permit Renewal</b>
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2. Affected Units

Unit ID #	ARA ID #	Unit Description
000001	3-0015	685 MWe (approx) coal-fired boiler
000002	3-0016	685 MWe (approx) coal-fired boiler

3. Standard Requirements:

**(A) Selection and Responsibilities of CO<sub>2</sub> Budget Source Compliance Account Authorized Account Representatives.**

- (1) Each CO<sub>2</sub> budget source shall have a CO<sub>2</sub> authorized account representative and an alternate CO<sub>2</sub> authorized account representative.  
(COMAR 26.09.01.04B)
- (2) Upon receipt of a complete account certificate of representation:
  - (a) The CO<sub>2</sub> authorized account representative and alternate CO<sub>2</sub> authorized account representative shall represent and, by representations, actions, inactions, or submissions, legally bind each owner or operator of the CO<sub>2</sub> budget source represented and each CO<sub>2</sub> budget unit at the source in all matters pertaining to this subtitle, notwithstanding any agreement between the CO<sub>2</sub> authorized account representative, alternate CO<sub>2</sub> authorized account representative, and the owners or operators; and  
(COMAR 26.09.01.04E (1))
  - (b) The owners or operators shall be bound by any decision or order issued to the CO<sub>2</sub> authorized account representative or alternate CO<sub>2</sub> authorized account representative by the Department or a court regarding the CO<sub>2</sub> budget source or unit.  
(COMAR 26.09.01.04E (2))
- (3) A CO<sub>2</sub> budget permit may not be issued, or a compliance account established for a CO<sub>2</sub> budget source until the Department has received a complete account certificate of representation for a CO<sub>2</sub> authorized account representative and alternate CO<sub>2</sub> authorized account representative of the source and the CO<sub>2</sub> budget units at the source.  
(COMAR 26.09.01.04F)
- (4) Each submission shall be signed and certified by the CO<sub>2</sub> authorized account representative or alternate CO<sub>2</sub> authorized account representative on behalf of each CO<sub>2</sub> budget source and shall include the following statement by the CO<sub>2</sub> authorized account representative or alternate CO<sub>2</sub> authorized account representative: "I am authorized to make the submission on behalf of the owners or operators of the CO<sub>2</sub> budget sources or CO<sub>2</sub> budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in the document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."  
(COMAR 26.09.01.04G)

## **(B) Distribution Of CO<sub>2</sub> Allowances And Compliance**

- (1) Unless otherwise specified in this chapter, a CO<sub>2</sub> budget source shall demonstrate compliance with its CO<sub>2</sub> budget emissions limitation by having one CO<sub>2</sub> allowance in its compliance account for every ton of CO<sub>2</sub> that it emits in a control period, by the allowance transfer deadline for that control period.  
(COMAR 26.09.02.03E(1))
- (2) The following CO<sub>2</sub> allowances may be deducted from a compliance account for purposes of complying with a budget source's CO<sub>2</sub> budget emissions limitation for a certain control period
  - (a) CO<sub>2</sub> allowances that are not CO<sub>2</sub> offset allowances and are identified as allowances falling within a prior control period or the same control period for which the allowances are deducted;
  - (b) CO<sub>2</sub> allowances that are held or transferred into the CO<sub>2</sub> budget source's compliance account as of the CO<sub>2</sub> allowance transfer deadline for that control period;
  - (c) CO<sub>2</sub> offset allowances that are available to be deducted for compliance during a control period may not exceed the following:
    - (i) 3.3 percent;
    - (ii) 5 percent, if the Department determines that there has been a Stage 1 trigger event; and
    - (iii) 10 percent, if the Department determines that there has been a Stage 2 trigger event.  
(COMAR 26.09.02.03E(2)(a)-(c))
- (3) The Department shall deduct CO<sub>2</sub> allowances from the CO<sub>2</sub> budget source's compliance account until the number of CO<sub>2</sub> allowances deducted equals the number of tons of total CO<sub>2</sub> emissions, less any CO<sub>2</sub> emissions attributable to the burning of eligible biomass.  
(COMAR 26.09.02.03E (3))
- (4) The identification of available CO<sub>2</sub> allowances for compliance deduction by serial number or by default is as follows:
  - (a) The CO<sub>2</sub> authorized account representative for a source's compliance account may request that specific CO<sub>2</sub> allowances, identified by serial number for a control period, be deducted; and
  - (b) In the absence of an identification or in the case of a partial identification of available CO<sub>2</sub> allowances by serial number, the Department shall deduct CO<sub>2</sub> allowances for a control period in the following descending order:
    - (i) For the first control period, all CO<sub>2</sub> allowances purchased by direct sale from the Department during years 2009, 2010, and 2011 resulting from the occurrence of the \$7 auction clearing price;
    - (ii) All CO<sub>2</sub> allowances for a control period allocated to a CO<sub>2</sub> budget unit from the Long Term Contract Set-aside Account or the Clean Generation Set-aside Account;
    - (iii) Subject to the relevant compliance deduction limitations identified in §E(2)(c) of this regulation, any CO<sub>2</sub> offset allowances transferred and recorded in the compliance account, in chronological order; and
    - (iv) Any CO<sub>2</sub> allowances, other than those identified in §E(4)(b)(i) — (iii) of this regulation, that

are available for deduction in the order they were recorded.

(COMAR 26.09.02.03E (4)(a)-(b))

(5) Deductions for Excess Emissions:

- (a) If a CO<sub>2</sub> budget source has excess emissions, the Department shall deduct, from the CO<sub>2</sub> budget source's compliance account, CO<sub>2</sub> allowances from allocation years that occur after the control period in which the source has excess emissions that equal three times the number of the source's excess emissions.
- (b) If a source has insufficient CO<sub>2</sub> allowances to cover three times the number of the source's excess emissions, the source shall immediately transfer sufficient allowances into its compliance account.
- (c) CO<sub>2</sub> offset allowances may not be deducted to account for the source's excess emissions.
- (d) Any CO<sub>2</sub> allowance deduction does not affect the liability of the owners or operators of the CO<sub>2</sub> budget units at the source for any fine, penalty, or assessment, or their obligation to comply with any other remedy, for the same violation, as ordered under applicable State law.  
(COMAR 26.09.02.03E (5)(a)-(d))

(6) The following guidelines apply in assessing fines, penalties, or other obligations:

- (a) For purposes of determining the number of days of violation, if a CO<sub>2</sub> budget unit has excess emissions for a control period, each day in the control period constitutes a day of violation unless the owners or operators of the unit can demonstrate to the satisfaction of the Department that a lesser number of days should be considered; and
- (b) The Department shall consider the amount of excess emissions in determining the severity of the violation.  
(COMAR 26.09.02.03E (6)(a)-(b))

(7) If the CO<sub>2</sub> budget source's compliance account no longer exists, the CO<sub>2</sub> allowances shall be deposited in a general account selected by the owner or operator of the CO<sub>2</sub> budget source.  
(COMAR 26.09.02.03E (7))

(8) Adjustments and Errors:

- (a) The Department may review and conduct independent audits concerning any submission under this subtitle and make appropriate adjustments of the information, if necessary.
- (b) The Department may correct any error in any account and, within 10 business days of making any correction, notify the CO<sub>2</sub> authorized account representative for the account  
(COMAR 26.09.02.03E (8)(a)-(b))

### **(C) Applicability and Administration**

- (1) The requirements of this permit apply to the owner or operator of a CO<sub>2</sub> budget unit. When this permit establishes a requirement such as the submittal of a permit application, a report, a request for allowances or transfer of allowances, or general information, these actions shall be achieved through the authorized account representative on behalf of the owner or operator of the affected CO<sub>2</sub> budget source or unit.  
(COMAR 26.09.02.02A)

- (2) The requirements of this subtitle are effective on January 1, 2009 or, for new CO<sub>2</sub> budget units, on

the day on which the unit commences operation.  
(COMAR 26.09.02.02C).

- (3) The provisions of this permit do not exempt or otherwise relieve the owners or operators of a CO<sub>2</sub> budget source from achieving compliance with any other provision of applicable State and federal laws and regulations.  
(COMAR 26.09.02.02D).
- (4) Unless otherwise stated under this subtitle, any time period scheduled to begin:
  - (a) On the occurrence of an act or event, begins on the day the act or event occurs; and
  - (b) Before the occurrence of an act or event, is computed so that the period ends the day before the act or event occurs.  
(COMAR 26.09.02.02F)
- (5) Unless otherwise stated, if the final day of any time period for performing an act required by this subtitle falls on a weekend or on a State or federal holiday, the time period is extended until or to the next business day.  
(COMAR 26.09.02.02G)

#### **(D) Permit Requirements**

- (1) The account representative or designate alternate account representative) of each affected unit at a source, (every fossil fuel fired unit with a nameplate capacity of 25 MW or greater) for that source shall comply with the following:
  - (a) The CO<sub>2</sub> authorized account representative for the source shall submit an initial CO<sub>2</sub> budget permit application by October 1, 2008, or 12 months before the date on which the CO<sub>2</sub> budget source, or a new unit at the source, commences operation.  
(COMAR 26.09.02.04A (2));
  - (b) The CO<sub>2</sub> budget permit application shall include the following in a format prescribed by the Department: 1) the identification of the CO<sub>2</sub> budget source; 2) facility name and the ORIS (Office of Regulatory Information Systems) or facility code assigned to the source by the Energy Information Administration of the U. S. Department of Energy, if applicable; 3) each CO<sub>2</sub> budget unit at the source; and 4) other information required by the Department.  
(COMAR 26.09.02.04A (3))
  - (c) The authorized account representative for the source shall submit a complete application for the renewal of an existing CO<sub>2</sub> budget permit on forms provided by the Department not later than 90 days before the expiration of the current CO<sub>2</sub> budget permit.  
(COMAR 26.09.02.04 E)
- (2) Each CO<sub>2</sub> budget source shall apply for and have in effect a CO<sub>2</sub> budget permit that contains all applicable requirements.  
(COMAR 26.09.02.04A (1)).
- (3) The CO<sub>2</sub> budget permit issued by the Department shall be separate but attached to the budget source's Part 70 permit.

(COMAR 26.09.02.04B)

- (4) A CO<sub>2</sub> budget permit expires 5 years from the date of issuance by the Department, unless an earlier expiration date is specified in the permit.

(COMAR 26.09.02.04D)

### **(E) Monitoring, Initial Certification and Recertification Requirements**

- (1) For each control period in which a CO<sub>2</sub> budget source is subject to the CO<sub>2</sub> budget emissions limitation, the CO<sub>2</sub> authorized account representative of the source shall submit a compliance certification report by the March 1 following the relevant control period.

(COMAR 26.09.02.05 A (1))

- (2) The CO<sub>2</sub> authorized account representative shall include in the compliance certification report the following:

(a) Identification of the source and each CO<sub>2</sub> budget unit at the source;

(b) At the CO<sub>2</sub> authorized account representative's option, the serial numbers of the CO<sub>2</sub> allowances that are to be deducted from the source's compliance account for the control period, including the serial numbers of any CO<sub>2</sub> offset allowances that are to be deducted subject to applicable limitations; and

(c) The compliance certification required by §A(3) of COMAR 26.11.02.05.

(COMAR 26.09.02.05 A (2))

- (3) In the compliance certification report, the CO<sub>2</sub> authorized account representative shall certify whether the source and each CO<sub>2</sub> budget unit at the source for which the compliance certification is submitted was operated during the control period in compliance with the requirements of this subtitle, including:

(a) Whether each CO<sub>2</sub> budget unit at the source was operated in compliance with the CO<sub>2</sub> budget emissions limitation;

(b) Whether the monitoring plan applicable to each unit at the source has been maintained to reflect the actual operation and monitoring of the unit and contains all information necessary to track CO<sub>2</sub> emissions from the unit;

(c) Whether all CO<sub>2</sub> emissions from each unit at the source were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including:

(i) Whether all conditional data was reported in the quarterly reports; or

(2) If conditional data were reported, whether the status of all conditional data has been resolved and all necessary quarterly report resubmissions have been made;

(d) Whether the basis for certification or for using an excepted monitoring method or approved alternative monitoring method has changed;

- (e) If a change is required to be reported, include: the nature and reasons for the change; when the change occurred; and how the unit's compliance status was determined after the change, including the method used to determine emissions when a change mandated the need for monitor recertification.  
(COMAR 26.09.02.05A (3) (a)-(e))
- (4) The Department, at its discretion, may review and conduct independent audits of any compliance certification or other submission required by this permit.  
(COMAR 26.09.02.05 B (1))
- (5) The Department may deduct CO<sub>2</sub> allowances from, or transfer CO<sub>2</sub> allowances to, a compliance account to correct errors in the account or to accurately reflect CO<sub>2</sub> emissions, based on the information in the compliance certification or other submissions.  
(COMAR 26.09.02.05 B (2))
- (6) The owner or operator of a CO<sub>2</sub> budget unit shall:
- (a) Install monitoring systems to monitor CO<sub>2</sub> concentration, stack gas flow rate, oxygen concentration, heat input, and fuel flow rate;
  - (b) Install all monitoring systems in accordance with 40 CFR Part 75, except for equation G-1 in Appendix G (see below); and

$$W_{CO_2} = \frac{(MW_C + MW_{O_2}) \times W_C}{2,000 MW_C} \text{ (Eq. G-1)}$$

Where:

W<sub>CO<sub>2</sub></sub>=CO<sub>2</sub> emitted from combustion, tons/day.

MW<sub>C</sub>=Molecular weight of carbon (12.0).

MW<sub>O<sub>2</sub></sub>=Molecular weight of oxygen (32.0)

W<sub>C</sub>= Carbon burned, lb/day, determined using fuel sampling and analysis and fuel feed rates.

- (c) Record, report, and verify the data from the monitoring systems.  
(COMAR 26.09.02.10A (1) (a)-(c))
- (7) Install and certify the monitoring system on or before the following dates:
- (a) For a CO<sub>2</sub> budget unit that commences commercial operation before July 1, 2008, the owner or operator shall comply on or before January 1, 2009; and
  - (b) For a CO<sub>2</sub> budget unit that commences commercial operation or constructs a new stack or flue on or after July 1, 2008, the owner or operator shall comply by January 1, 2009, or 90 operating days after the date on which the unit commences commercial operation.

(COMAR 26.09.02.10 A (1) (d))

(8) The owner or operator of a CO<sub>2</sub> budget unit that does not meet the applicable compliance date shall, in accordance with the provisions in 40 CFR §75.31(b)(2) or (c)(3), or §2.4 of Appendix D, determine, record, and report maximum potential or, as appropriate, minimum potential for the following:

- (a) CO<sub>2</sub> concentration;
- (b) CO<sub>2</sub> emissions rate;
- (c) Stack gas moisture content;
- (d) Fuel flow rate; and
- (e) Any other parameter required to determine CO<sub>2</sub> mass emissions.  
(COMAR 26.09.02.10 A (2) (a)-(e))

(9) The owner or operator of a CO<sub>2</sub> budget unit that does not meet the applicable compliance date for any monitoring system shall determine, record, and report substitute data using the applicable missing data procedures in 40 CFR Part 75 Subpart D, or Appendix D, instead of the maximum potential values or, as appropriate, minimum potential values for a parameter, if the owner or operator demonstrates that there is continuity between the data streams for that parameter before and after the construction or installation.

(COMAR 26.09.02.10 A (3))

(10) An owner or operator of a CO<sub>2</sub> budget unit or a non-CO<sub>2</sub> budget unit monitored under 40 CFR §75.72 (b) (2) (ii) may not:

- (a) Use any alternative monitoring system, alternative reference method, or any other alternative for the required continuous emissions monitoring system without having obtained prior written approval from the Department;
- (b) Operate the unit so as to discharge, or allow to be discharged, CO<sub>2</sub> emissions to the atmosphere without accounting for all emissions in accordance with the applicable provisions of this chapter and 40 CFR Part 75;
- (c) Disrupt the operation of the CEMS, any portion of the CEMS, or any other approved emissions monitoring method, and thereby avoid monitoring and recording CO<sub>2</sub> mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed; or
- (e) Permanently discontinue use of the approved CEMS unless the owner or operator monitors emissions with a system approved in accordance with this chapter and 40 CFR Part 75.  
(COMAR 26.09.02.10 A (4) (a)-(e))

(11) For purposes of this subtitle only, the owner or operator of a CO<sub>2</sub> budget unit is exempt from demonstrating compliance with the initial certification requirements of 40 CFR §75.20 for a

monitoring system if the following conditions are met:

- (a) The monitoring system has been previously certified in accordance with 40 CFR §75.20; and
  - (b) The applicable quality assurance and quality-control requirements of 40 CFR §75.21 and Appendix B and Appendix D of 40 CFR Part 75 are fully met for the certified monitoring system.  
(COMAR 26.09.02.10 B (1) (a)-(b))
- (12) The recertification provisions of this regulation apply to a monitoring system exempt from the initial certification requirements of this regulation.  
(COMAR 26.09.02.10 B (2))
- (13) If the Department has previously approved a petition under 40 CFR §75.72(b)(2)(ii) or 40 CFR §75.16(b)(2)(ii)(B) pursuant to 40 CFR §75.13 for apportioning the CO<sub>2</sub> emissions rate measured in a common stack or a petition under 40 CFR §75.66 for an alternative requirement in 40 CFR Part 75, the CO<sub>2</sub> authorized account representative shall resubmit the petition to the Department to determine whether the approval applies under this chapter.  
(COMAR 26.09.02.10 B (3))
- (14) The owner or operator of a CO<sub>2</sub> budget unit shall comply with the initial certification and recertification procedures for a CEMS and an excepted monitoring system under 40 CFR Part 75, Appendix D.  
(COMAR 26.09.02.10 B (4))
- (15) The owner or operator of a unit that qualifies to use the low mass emissions excepted monitoring methodology in 40 CFR §75.19 or that qualifies to use an alternative monitoring system under 40 CFR Part 75, Subpart E, shall comply with this regulation.  
(COMAR 26.09.02.10 B (5))
- (16) When the owner or operator replaces, modifies, or changes a CEMS that the Department determines significantly affects the ability of the system to accurately measure or record CO<sub>2</sub> mass emissions or to meet the quality assurance and quality control requirements of 40 CFR §75.21 or Appendix B, the owner or operator shall recertify the monitoring system according to 40 CFR §75.20(b).  
(COMAR 26.09.02.10 C (1))
- (17) When the owner or operator replaces, modifies, or changes the flue gas handling system or the unit's operation in a manner that the Department determines has significantly changed the flow or concentration profile, the owner or operator shall recertify the CEMS according to 40 CFR §75.20(b).  
(COMAR 26.09.02.10 C (2))
- (18) Approval Process for Initial Certifications and Recertification. The procedures in 40 CFR §75.20(b)(5) and (g)(7) apply for recertification. The CO<sub>2</sub> authorized account representative shall submit to the Department:
- (a) A written notice of the dates of certification; and



- (b) A recertification application for each monitoring system, including the information specified in 40 CFR §75.63.  
(COMAR 26.09.02.10 C(3) (a)-(b))
- (19) Provisional certification data for a monitor shall be:
- (a) Determined in accordance with 40 CFR §75.20(a)(3);
- (b) A provisionally certified monitor may be used for a period not to exceed 120 days after receipt of the complete certification application for the monitoring system or component; and
- (c) Data measured and recorded by the provisionally certified monitoring system or component is considered valid quality assured data, retroactive to the date and time of provisional certification, if the Department does not issue a notice of disapproval within 120 days of receipt of the complete certification application.  
(COMAR 26.09.02.10 C (4) (a)-(c))
- (20) The Department shall issue a written notice of approval or disapproval of the certification application to the owner or operator within 120 days of receipt of the complete certification application.  
(COMAR 26.09.02.10 D (1))
- (21) If the Department does not issue the notice within the 120-day period, each monitoring system that meets the applicable performance requirements of 40 CFR Part 75 and is included in the certification application shall be deemed certified for use.  
(COMAR 26.09.02.10 D (2))
- (22) If the certification application is complete and shows that each monitoring system meets the applicable performance requirements of 40 CFR Part 75, the Department shall issue a written notice of approval of the certification application within 120 days of receipt.  
(COMAR 26.09.02.10 D (3))
- (23) If the certification application is not complete, the Department shall issue a written notice of incompleteness that sets a reasonable date by which the CO<sub>2</sub> authorized account representative is to submit the additional information required to complete the certification application.  
(COMAR 26.09.02.10 D (4))
- (24) If the CO<sub>2</sub> authorized account representative does not comply with the notice of incompleteness by the specified date, the Department may issue a notice of disapproval.  
(COMAR 26.09.02.10 D (5))
- (25) If the Department issues a notice of disapproval of a certification application or a notice of disapproval of certification status, the owner or operator shall substitute the following values for each disapproved monitoring system, for each hour of unit operation during the period of invalid data beginning with the date and hour of provisional certification and continuing until the time, date, and hour specified under 40 CFR §75.20(a)(5)(i) or 75.20(g)(7):

- (a) For units using or intending to monitor for CO<sub>2</sub> mass emissions using heat input or for units using the low mass emissions excepted methodology under 40 CFR §75.19, the maximum potential hourly heat input of the unit; or
  - (b) For units intending to monitor for CO<sub>2</sub> mass emissions using a CO<sub>2</sub> pollutant concentration monitor and a flow monitor, the maximum potential concentration of CO<sub>2</sub> and the maximum potential flow rate of the unit under 40 CFR Part 75, Appendix A, §2.1.  
(COMAR 26.09.02.10 D (6) (a)-(b))
- (26) The CO<sub>2</sub> authorized account representative shall submit a notification of certification retest dates and a new certification application. The owner or operator shall repeat all certification tests or other requirements that were failed by the monitoring system, as indicated in the Department's notice of disapproval, not later than 30 operating days after the date of issuance of the notice of disapproval.  
(COMAR 26.09.02.10 D (7))
- (27) The owner or operator of a unit qualified to use the low mass emissions excepted methodology under 40 CFR §75.19 shall meet the applicable certification and recertification requirements of 40 CFR §§75.19(a) (2) and 75.20(h).  
(COMAR 26.09.02.10 E (1))
- (28) If the owner or operator of this unit elects to certify a fuel flow meter system for heat input determinations, the owner or operator shall also meet the certification and recertification requirements in 40 CFR §75.20(g).  
(COMAR 26.09.02.10 E (2))
- (29) Certification and Recertification Procedures for Alternative Monitoring Systems. For each unit for which the owner or operator intends to use an alternative monitoring system approved by the Department, 40 CFR Part 75, Subpart E, shall be used to comply with the applicable notification and application procedures of 40 CFR §75.20(f).  
(COMAR 26.09.02.10 F)
- (30) When any monitoring system fails to meet the quality assurance and quality control requirements or data validation requirements of 40 CFR Part 75, data shall be substituted using the applicable procedures in 40 CFR Part 75, Subpart D, Appendix D.  
(COMAR 26.09.02.10 G (1))
- (31) Audit Decertification.
- (a) Whenever both an audit of a monitoring system and a review of the initial certification or recertification application reveal that any monitoring system should not have been certified or recertified because it did not meet a particular performance specification or the applicable provisions of 40 CFR Part 75, both at the time of the initial certification or recertification application submission and at the time of the audit, the Department shall issue a notice of disapproval of the certification status of the monitoring system.
  - (b) By issuing the notice of disapproval, the certification status of the monitoring system is prospectively revoked.  
(COMAR 26.09.02.10 G (2)(a) and (b))

- (32) The data measured and recorded by the monitoring system may not be considered valid quality-assured data from the date of issuance of the notification of the revoked certification status.  
(COMAR 26.09.02.10 G (3))

## **(F) Record Keeping and Reporting Requirements**

- (1) The CO<sub>2</sub> authorized account representative shall comply with all record-keeping and reporting requirements in COMAR 26.09.02.10 and the applicable record-keeping and reporting requirements under 40 CFR §75.73.  
(COMAR 26.09.02.11 A)
- (2) The CO<sub>2</sub> authorized account representative shall submit quarterly reports as described below in this section.  
(COMAR 26.09.02.11 B (1))
- (3) The report shall contain the CO<sub>2</sub> mass emissions data for the CO<sub>2</sub> budget unit in an electronic format, unless otherwise required by the Department, for each calendar quarter beginning with:
- (a) The calendar quarter covering January 1, 2009 — March 31, 2009, for a unit that commences commercial operation before July 1, 2008; or
  - (b) For a unit commencing commercial operation on or after July 1, 2008, the calendar quarter corresponding to the earlier of the following dates: date of provisional certification; or applicable deadline for initial certification.  
(COMAR 26.09.02.11 B (2) (a)-(b))
- (4) The CO<sub>2</sub> authorized account representative shall submit each quarterly report within 30 days following the end of the calendar quarter covered by the report and in accordance with 40 CFR Part 75, Subpart H, §75.64 and 40 CFR Part 75, Subpart G except for the opacity, NO<sub>x</sub> and SO<sub>2</sub> provisions.  
(COMAR 26.09.02.11 B (4))
- (5) The CO<sub>2</sub> authorized account representative shall submit a compliance certification in support of each quarterly report. The certification shall state that:
- (a) The monitoring data submitted were recorded in accordance with the applicable requirements of this chapter and 40 CFR Part 75, including the quality assurance procedures and specifications;
  - (b) For a unit with add-on CO<sub>2</sub> emissions controls and for all hours where data are substituted in accordance with 40 CFR §75.34(a)(1), the add-on emissions controls were operating within the range of parameters listed in the quality assurance and quality control program under 40 CFR Part 75, Appendix B, and the substitute values do not systematically underestimate CO<sub>2</sub> emissions; and
  - (c) The CO<sub>2</sub> concentration values substituted for missing data under 40 CFR Part 75, Subpart D, do not systematically underestimate CO<sub>2</sub> emissions.  
(COMAR 26.09.02.11 B (5) (a)-(c))

- (6) The CO<sub>2</sub> authorized account representative of a CO<sub>2</sub> budget unit may submit a petition to the Department under 40 CFR §75.66 requesting approval to apply an alternative to any requirement of this chapter.  
(COMAR 26.09.02.11 C)
- (7) The CO<sub>2</sub> authorized account representative or alternate CO<sub>2</sub> authorized account representative of a CO<sub>2</sub> budget unit that burns eligible biomass as a compliance mechanism under this chapter shall report the following information for each calendar quarter:
- (a) For each shipment of solid eligible biomass fuel fired at the CO<sub>2</sub> budget unit:
    - (i) Total eligible biomass fuel input, on an as-fired basis, in pounds; and
    - (ii) The moisture content, on an as-fired basis, as a fraction of weight;
  - (b) For each distinct type of gaseous eligible biomass fuel fired at the CO<sub>2</sub> budget unit:
    - (i) The density of the biogas, on an as-fired basis, in pounds per standard cubic foot; and
    - (ii) The moisture content of the biogas, as a fraction by total weight;
  - (c) For each distinct type of eligible biomass fuel fired at the CO<sub>2</sub> budget unit:
    - (i) The dry basis carbon content of the fuel type, as a fraction by dry weight;
    - (ii) The dry basis higher heating value, in MMBtu per dry pound;
    - (iii) The total dry basis eligible biomass fuel input, in pounds;
    - (iv) The total eligible biomass fuel heat input; and
    - (v) Chemical analysis, including heat value and carbon content;
  - (d) The total amount of CO<sub>2</sub> emitted from the CO<sub>2</sub> budget unit due to firing eligible biomass fuel, in tons, calculated as in §D(2)(b) of this regulation;
  - (e) The total heat input to the CO<sub>2</sub> budget unit due to firing eligible biomass fuel, in MMBtu, calculated below; and
  - (f) Description and documentation of monitoring technology and fuel sampling methodology employed, including sampling frequency.  
(COMAR 26.09.02.11 D (1) (a)-(f))
- (8) An owner or operator of a CO<sub>2</sub> budget unit shall calculate and submit on a quarterly basis the total dry weight for each distinct type of eligible biomass fired by the CO<sub>2</sub> budget unit during the reporting quarter as follows:
- (a) For solid eligible biomass fuel, determined as follows:

$$F_j = \sum_{i=1}^m (1 - M_i) x F_i$$

where:

- (i)  $F_j$  = Total eligible biomass dry basis fuel input (pounds) for fuel type j;
- (ii)  $F_i$  = Eligible biomass as fired fuel input (pounds) for fired shipment i;
- (iii)  $M_i$  = Moisture content (fraction) for fired shipment i;
- (iv) i = fired fuel shipment;
- (v) j = fuel type; and
- (vi) m = number of shipments.

(b) For gaseous eligible biomass fuel, as determined as follows:

$$F_j = D_j x V_j x (1 - M_j)$$

where:

- (i)  $F_j$  = Total eligible biomass dry basis fuel input (pounds) for fuel type j;
- (ii)  $D_j$  = Density of biogas (pounds/scf) for fuel type j;
- (iii)  $V_j$  = Total volume (scf) for fuel type j;
- (iv)  $M_j$  = Moisture content (fraction) for fuel type j; and
- (v) j = fuel type

(COMAR 26.09.02.11 D (2) (a)-(b))

(9) The amount of CO<sub>2</sub> emissions that is produced from the firing of eligible biomass for any full calendar quarter, during which either no fuel other than eligible biomass is combusted or during which fuels other than eligible biomass are combusted, is determined as follows:

$$CO_2 \text{ tons} = \sum_{j=1}^n F_j x C_j x O_j \left( \frac{44 \left( \frac{g}{mol CO_2} \right)}{12 \left( \frac{g}{mol C} \right)} \right) (0.0005)$$

where:

- (a) CO<sub>2</sub> tons = CO<sub>2</sub> emissions due to firing of eligible biomass for the reporting quarter;
- (b)  $F_j$  = Total eligible biomass dry basis fuel input (pounds) for fuel type j, as calculated in §D(2)(a) of this regulation;
- (c)  $C_j$  = Carbon fraction (dry basis) for fuel type j;
- (d)  $O_j$  = Oxidation factor for eligible biomass fuel type j, derived for solid fuels based on the ash content of the eligible biomass fired and the carbon content of this ash or for gaseous eligible biomass fuels, a default oxidation factor of 0.995 may be used;

$$(e) \frac{44 \left( \frac{g}{molCO_2} \right)}{12 \left( \frac{g}{molC} \right)}$$

= The number of tons of carbon dioxide that are created when one ton of carbon is combusted;

(f) 0.0005 = The number of short tons which is equal to one pound;

(g) j = Fuel type; and

(h) n = number of distinct fuel types.

(COMAR 26.09.02.11 D (3))

(10) Heat input due to firing of eligible biomass for each quarter shall be determined as follows:

(a) For each distinct fuel type:

$$H_j = F_j \times HHV_j$$

where:

(i) H<sub>j</sub> = Heat input (MMBtu) for fuel type j;

(ii) F<sub>j</sub> = Total eligible biomass dry basis fuel input (pounds) for fuel type j;

(iii) HHV<sub>j</sub> = Higher heating value (MMBtu/pound), dry basis, for fuel type j, as determined through chemical analysis;

(iv) j = Fuel type.

(b) For all fuel types:

$$HeatInputMMBtu = \sum_{j=1}^n H_j$$

where:

(i) H<sub>j</sub> = Heat input (MMBtu) for fuel type j;

(ii) j = fuel type; and

(iii) n = number of distinct fuel types.

Fuel sampling methods and fuel sampling technology shall be consistent with the New York State Renewable Portfolio Standard Biomass Guidebook, May 2006.

(COMAR 26.09.02.11D(4) & D(5))

(11) A CO<sub>2</sub> budget unit shall submit to the Department the megawatt-hour value and a statement certifying that the megawatt-hour of electrical output reported reflects the total actual electrical output for all CO<sub>2</sub> budget units at the facility used by the independent system operator (ISO) to determine settlement resources of energy market participants.

(COMAR 26.09.02.11 E (1))

(12) A CO<sub>2</sub> budget unit shall report gross hourly megawatts to the Department in the same electronic data report (EDR) for gross output as submitted to the EPA Administrator, for the operating time in the hour, added for all hours in a year.

(COMAR 26.09.02.11 E (2))

- (13) A CO<sub>2</sub> budget unit shall submit the net electrical output to the Department in accordance with this regulation. A CO<sub>2</sub> budget source whose electrical output is not used in the independent system operator (ISO) energy market settlement determinations shall propose a method for quantification of net electrical output.

(COMAR 26.09.02.11 E (3))

- (14) Report of net Steam Output.

(a) CO<sub>2</sub> budget sources selling steam shall use billing meters to determine net steam output or an alternative method to measure net steam output approved by the Department.

(b) If data for steam output is not available, the CO<sub>2</sub> budget source may report heat input, substituting useful steam output for steam output.

(COMAR 26.09.02.11 E (4) (a)-(b))

- (15) Each CO<sub>2</sub> budget source shall submit an output monitoring plan with a description and diagram that include the following:

(a) If the CO<sub>2</sub> budget unit monitors net electric output, the diagram shall contain all CO<sub>2</sub> budget units and all generators served by each CO<sub>2</sub> budget unit and the relationship between CO<sub>2</sub> budget units and generators;

(b) If a generator served by a CO<sub>2</sub> budget unit is also served by a nonaffected unit, the nonaffected unit and its relationship to each generator shall be indicated on the diagram;

(c) The diagram shall indicate where the net electric output is measured and include all electrical inputs and outputs to and from the plant;

(d) If net electric output is determined using a billing meter, the diagram shall show each billing meter used to determine net sales of electricity and show that all electricity measured at the point of sale is generated by the CO<sub>2</sub> budget units;

(e) If the CO<sub>2</sub> budget unit monitors net thermal output, the diagram shall indicate all steam or hot water coming into the net steam system, including steam from CO<sub>2</sub> budget units and nonaffected units, and all exit points of steam or hot water from the net steam system;

(f) Each input and output stream shall have an estimated temperature, pressure and phase indicator, and an enthalpy in Btu per pound;

(g) The diagram of the net steam system shall identify all useful loads, house loads, parasitic loads, any other steam loads, and all boiler feedwater returns;

(h) The diagram shall represent all energy losses in the system as either usable or unusable losses;

(i) The diagram shall indicate all flow meters, temperature or pressure sensors, or other equipment used to calculate gross thermal output; and

- (j) If a sales agreement is used to determine net thermal output, the diagram shall show the monitoring equipment used to determine the sales of steam.  
(COMAR 26.09.02.11 F (2) (a)-(j))

(16) The description of the output monitoring system shall include:

- (a) A written description of the output system and the equations used to calculate output, and, for net thermal output systems, descriptions and justifications of each useful load;
- (b) A detailed description of all quality assurance and quality control activities that will be performed to maintain the output system; and
- (c) Documentation supporting any output value to be used as a missing data value if there are periods of invalid output data.
- (d) The missing data output value shall be either zero or an output value that is likely to be lower than a measured value and approved as part of the required monitoring plan.  
(COMAR 26.09.02.11 F (3) (a)-(b))

(17) A certification statement shall be submitted by the CO<sub>2</sub> authorized account representative stating that either:

- (a) The output monitoring system consists entirely of billing meters; or
- (b) The output monitoring system meets one of the accuracy requirements for nonbilling meters.  
(COMAR 26.09.02.11 G (1) (a)-(b))

(18) The billing meter shall record the electric or thermal output. Any electric or thermal output values reported shall be the same as the values used in billing for the output.  
(COMAR 26.09.02.11 G (2))

(19) For nonbilling meters, either the output monitoring system shall meet an accuracy of within 10 percent of the reference value, or each component monitor for the output system shall meet an accuracy of within 3 percent of the full scale value, whichever is less stringent.  
(COMAR 26.09.02.11 G (3))

(20) The system approach to accuracy shall include:

- (a) A determination of how the system accuracy of 10 percent is achieved using the individual components in the system; and
- (b) Data loggers and any wattmeters used to calculate the final net electric output data or any flowmeters for steam or condensate, temperature measurement devices, absolute pressure measurement devices, and differential pressure devices used for measuring thermal energy.  
(COMAR 26.09.02.11 G (4) (a)-(b))

(21) If, upon testing a piece of output measurement equipment, it is determined that the output readings are



not accurate to within 3 percent of the full scale value, then the equipment shall be repaired or replaced to meet that requirement.

(COMAR 26.09.02.11 G (5))

- (22) Data is invalid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes the accuracy test.

(COMAR 26.09.02.11 G (6))

- (23) Ongoing quality assurance and quality control activities shall be performed in order to maintain the output system.

(COMAR 26.09.02.11 H (1))

- (24) If billing meters are used to determine output, quality assurance and quality control activities are not required beyond what are already performed.

(COMAR 26.09.02.11 H (2))

- (25) Certain types of equipment such as potential transformers, current transformers, nozzle and venture type meters, and the primary element of an orifice plate only require an initial certification of calibration and do not require periodic recalibration unless the equipment is physically changed.

(a) Pressure and temperature transmitters accompanying an orifice plate will require periodic retesting.

(b) For other types of equipment, the meter accuracy shall be recalibrated or verified at least once every 2 years, unless a consensus standard allows for less frequent calibrations or accuracy tests.

(c) For nonbilling meters, either the output monitoring system shall meet an accuracy of within 10 percent of the reference value, or each component monitor for the output system shall meet an accuracy of within 3 percent of the full scale value, whichever is less stringent.

(d) If, upon testing a piece of output measurement equipment, it is determined that the output readings are not accurate to within 3 percent of the full scale value, then the equipment shall be repaired or replaced to meet that requirement.

(COMAR 26.09.02.11 H (3) (a)-(e))

- (26) Out-of-Control Periods.

(a) If, upon testing a piece of output measurement equipment, it is determined that the output readings are not accurate to the certification value, data is invalid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes the accuracy test.

(b) All invalid data shall be replaced by either zero or an output value that is likely to be lower than a measured value and that is approved as part of the required monitoring plan.

(COMAR 26.09.02.11 H (4) (a)-(b))

- (27) The CO<sub>2</sub> authorized account representative shall submit annual output reports, as follows:

(a) Data shall be sent both electronically and in hardcopy by March 1 for the immediately preceding calendar year; and

(COMAR 26.09.02.11 I (1))

- (28) The annual report shall include unit level megawatt hours, all useful steam output, and a certification statement from the CO<sub>2</sub> authorized account representative stating the following, "I am authorized to make this submission on behalf of the owners and operators of the CO<sub>2</sub> budget sources or CO<sub>2</sub> budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(COMAR 26.09.02.11 I (2))

### **(G) CO<sub>2</sub> Emission Offset Projects**

- (1) In order to qualify for the award of CO<sub>2</sub> offset allowances, the following offset projects shall satisfy all applicable requirements identified in COMAR 26.09.03 and initially commence on or after December 20, 2005:
- (a) Landfill methane capture and destruction;
  - (b) Reduction in emissions of sulfur hexafluoride (SF<sub>6</sub>);
  - (c) Sequestration of carbon due to afforestation;
  - (d) Reduction or avoidance of CO<sub>2</sub> emissions from natural gas, oil, or propane end-use combustion due to end-use energy efficiency; and
  - (e) Avoided methane emissions from agricultural manure management operations.

(COMAR 26.09.03.02 A (1)-(5))

#### **4. Permit Application (See Attachment)**

MARYLAND DEPARTMENT OF THE ENVIRONMENT

Air and Radiation Administration / Air Quality Permits Program
1800 Washington Boulevard, STE 720 Baltimore, MD 21230-1720
(410) 537-3230 • 1-800-633-6101 • www.mde.maryland.gov

MARYLAND CO2 BUDGET TRADING PROGRAM PERMIT APPLICATION

Mail Form to: MDE/ARA, PO Box 2037, Baltimore, MD 21203-2037

1) CO2 Authorized Account Representative Contact Information

Name: Cole Muller Phone: 267-234-2993
Title: Vice President Fax:
Mailing Address: 600 Hamilton Street Suite 600
City: Allentown State: PA Zip Code: 18101 County: Lehigh

2) Alternate CO2 Authorized Account Representative Information

Name: Edwin Much Phone: 410-787-5423
Title: Regional Environmental Director Fax:
Mailing Address: 1005 Brandon Shores Road Suite 100
City: Baltimore State: MD Zip Code: 21226 County: Anne Arundel

3) CO2 Budget Source Identification and Location

Name: Brandon Shores Power Plant Phone: 410-787-5423
Mailing Address: 2030 Brandon Shores Road
City: Baltimore State: MD Zip Code: 21226 County: Anne Arundel

ARA Premises Identification #: 24-003-0468 ORIS ID: 000602

Facility Code Assigned by Energy Information Administration, U.S. Dept. Of Energy: 000602

4) CO2 Budget Units at Source

Table with 3 columns: Budget Unit's ARMA Registration #, Facility Name or Identifier, Installation Date. Rows 1-12.

# MARYLAND CO<sub>2</sub> BUDGET TRADING PROGRAM PERMIT APPLICATION

Mail Form to: MDE/ARA, PO Box 2037, Baltimore, MD 21203-2037

## 5) Limited Industrial Exemption (Industrial Generator- Fossil Fuel Fired w/ Nameplate Capacity of 25MW or greater)

A) Is the source willing to accept a permit condition that no more than 10% of annual electrical output will be sent to the PJM grid?

YES \_\_\_\_\_ NO X

B) Is the source willing to submit a climate action plan, for approval by the Department, which addresses how the source will reduce CO<sub>2</sub> emissions through reasonably available reduction practices?

YES \_\_\_\_\_ NO X

C) If the answer to questions A and B above is yes, is the source requesting the Department to grant an exemption to the CO<sub>2</sub> Budget Trading Program?

YES \_\_\_\_\_ NO X

---

"I CERTIFY UNDER PENALTY OF LAW THAT THE INFORMATION SUBMITTED IN THIS REQUEST FOR COVERAGE IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

---

CO<sub>2</sub> Authorized Account Representative Signature

Name Edwin Much Date 6/28/21

Print/Type Edwin Much



March 29, 2021

Ms. Marcie Gurley, Chief Technical Division  
Maryland Department of the Environment  
Air and Radiation Management Administration  
1800 Washington Boulevard  
Baltimore, MD 21230-1718

Re: Acid Rain Permit Renewal Application

Dear Ms. Gurley,

Enclosed please find the EPA CAMD Acid Rain Permit Renewal Applications for Raven Power's Brandon Shores and H.A. Wagner Generating Facilities.

Please contact myself at 410-787-5423, or by email at [edwin.much@talenergy.com](mailto:edwin.much@talenergy.com). You may also contact Melissa Sampson, Environmental Manager, at 410-787-5166, or by email at [melissa.sampson@talenergy.com](mailto:melissa.sampson@talenergy.com), with any questions regarding this application.

Regards,

Edwin Much  
Regional Environmental Director



# Acid Rain Permit Application

For more information, see instructions and 40 CFR 72.30 and 72.31.

This submission is:  new  revised  for ARP permit renewal

## STEP 1

Identify the facility name,  
State, and plant (ORIS) code.

Facility (Source) Name	Brandon Shores	State	Maryland	Plant Code	0602
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## STEP 2

Enter the unit ID# for every  
affected unit at the affected  
source in column "a."

a	b
Unit ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)
FSC-BS-Unit 1	Yes
FSC-BS-Unit 2	Yes

Facility (Source) Name (from STEP 1) Brandon Shores
---

**STEP 3****Permit Requirements****Read the standard requirements.**

- (1) The designated representative of each affected source and each affected unit at the source shall:
  - (i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
  - (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each affected source and each affected unit at the source shall:
  - (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and
  - (ii) Have an Acid Rain Permit.

**Monitoring Requirements**

- (1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

**Sulfur Dioxide Requirements**

- (1) The owners and operators of each source and each affected unit at the source shall:
  - (i) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and
  - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
  - (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
  - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

**Nitrogen Oxides Requirements**

The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Facility (Source) Name (from STEP 1) Brandon Shores
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**STEP 3, Cont'd.****Excess Emissions Requirements**

- (1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
- (2) The owners and operators of an affected source that has excess emissions in any calendar year shall:
  - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
  - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

**Recordkeeping and Reporting Requirements**

- (1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
  - (i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
  - (ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
  - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
  - (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- (2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

**Liability**

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
- (6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.
- (7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.



Facility (Source) Name (from STEP 1) Brandon Shores
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## STEP 3, Cont'd.

Effect on Other Authorities

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (2) Limiting the number of allowances a source can hold, provided, that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Act.
- (3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act, or,
- (5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

## STEP 4

Certification

**Read the certification statement, sign, and date.**

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name	Edwin Much	
Signature	Edwin Much	Date 3/22/21



# Acid Rain Permit Application

For more information, see instructions and 40 CFR 72.30 and 72.31.

This submission is:  new  revised  for ARP permit renewal

## STEP 1

Identify the facility name, State, and plant (ORIS) code.

Facility (Source) Name H.A. Wagner	State Maryland	Plant Code 1554
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## STEP 2

Enter the unit ID# for every affected unit at the affected source in column "a."

a	b
Unit ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)
FSC-HAW-Unit 1	Yes
FSC-HAW-Unit 2	Yes
FSC-HAW-Unit 3	Yes
FSC-HAW-Unit 4	Yes

Facility (Source) Name (from STEP 1) H.A. Wagner
--

**STEP 3****Permit Requirements****Read the standard requirements.**

- (1) The designated representative of each affected source and each affected unit at the source shall:
  - (i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
  - (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each affected source and each affected unit at the source shall:
  - (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and
  - (ii) Have an Acid Rain Permit.

**Monitoring Requirements**

- (1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

**Sulfur Dioxide Requirements**

- (1) The owners and operators of each source and each affected unit at the source shall:
  - (i) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and
  - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
  - (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
  - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

**Nitrogen Oxides Requirements**

The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Facility (Source) Name (from STEP 1) H.A. Wagner
--

**STEP 3, Cont'd.****Excess Emissions Requirements**

- (1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
- (2) The owners and operators of an affected source that has excess emissions in any calendar year shall:
  - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
  - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

**Recordkeeping and Reporting Requirements**

- (1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
  - (i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
  - (ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
  - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
  - (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- (2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

**Liability**

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
- (6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.
- (7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Facility (Source) Name (from STEP 1) H.A. Wagner
--

**STEP 3, Cont'd.****Effect on Other Authorities**

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (2) Limiting the number of allowances a source can hold; provided, that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Act;
- (3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
- (5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

**STEP 4****Certification**

**Read the certification statement, sign, and date.**

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name	<i>Edwin Much</i>	
Signature	<i>Edwin Much</i>	Date <i>3/22/21</i>

Maryland Department of the Environment  
Air and Radiation Administration

**CO<sub>2</sub> BUDGET TRADING PROGRAM PERMIT**

<b>Plant Name:</b> Herbert A Wagner	
<b>Affected Trading Units:</b> 000001; 000002; 000003; & 000004	
<b>Owner:</b> Raven Power Fort Smallwood LLC	<b>ORIS Code</b> 001554
<b>Effective Date</b> From: XXXXX, 2022 To: September 30, 2027	

**Contents:**

1. Statement of Basis
2. Table of Affected Units
3. Standard Requirements.
4. The permit application forms submitted for this source.

1. Statement of Basis

Statutory and Regulatory Authorities: In accordance with Environmental Article §2-401, Annotated Code of Maryland, the Maryland Department of the Environment, Air and Radiation Administration issues this permit pursuant to COMAR 26.09.01 thru COMAR 26.09.04.

**Initial Permit Approval**

\_\_\_\_\_  
Christopher Hoagland, Director  
Air and Radiation Administration

\_\_\_\_\_  
Date of Issue

Herbert. A. Wagner  
Raven Power Fort Smallwood LLC.

CO<sub>2</sub> Permit  
Renewal

2. Affected Units

Unit ID #	ARA ID #	Unit Description
000001	4-0307	145 MWe (approx) dual fuel fired boiler-natural gas primary/No 6 FO back-up
000002	4-0308	145 MWe (approx) coal-fired boiler
000003	4-0003	350 MWe (approx) coal-fired boiler
000004	4-0017	420 MWe (approx) No 6 fuel oil fired boiler

3. Standard Requirements:

**(A) Selection and Responsibilities of CO<sub>2</sub> Budget Source Compliance Account Authorized Account Representatives.**

- (1) Each CO<sub>2</sub> budget source shall have a CO<sub>2</sub> authorized account representative and an alternate CO<sub>2</sub> authorized account representative.  
(COMAR 26.09.01.04B)
- (2) Upon receipt of a complete account certificate of representation:
  - (a) The CO<sub>2</sub> authorized account representative and alternate CO<sub>2</sub> authorized account representative shall represent and, by representations, actions, inactions, or submissions, legally bind each owner or operator of the CO<sub>2</sub> budget source represented and each CO<sub>2</sub> budget unit at the source in all matters pertaining to this subtitle, notwithstanding any agreement between the CO<sub>2</sub> authorized account representative, alternate CO<sub>2</sub> authorized account representative, and the owners or operators;  
(COMAR 26.09.01.04E (1))
  - (b) The owners or operators shall be bound by any decision or order issued to the CO<sub>2</sub> authorized account representative or alternate CO<sub>2</sub> authorized account representative by the Department or a court regarding the CO<sub>2</sub> budget source or unit.  
(COMAR 26.09.01.04E (2))
- (3) A CO<sub>2</sub> budget permit may not be issued or a compliance account established for a CO<sub>2</sub> budget source until the Department has received a complete account certificate of representation for a CO<sub>2</sub> authorized account representative and alternate CO<sub>2</sub> authorized account representative of the source and the CO<sub>2</sub> budget units at the source.  
(COMAR 26.09.01.04F)
- (4) Each submission shall be signed and certified by the CO<sub>2</sub> authorized account representative or alternate CO<sub>2</sub> authorized account representative on behalf of each CO<sub>2</sub> budget source and shall include the following statement by the CO<sub>2</sub> authorized account representative or alternate CO<sub>2</sub> authorized account representative: "I am authorized to make the submission on behalf of the owners or operators of the CO<sub>2</sub> budget sources or CO<sub>2</sub> budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the

statements and information submitted in the document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(COMAR 26.09.01.04G)

## **(B) Distribution Of CO<sub>2</sub> Allowances And Compliance**

- (1) Unless otherwise specified in this chapter, a CO<sub>2</sub> budget source shall demonstrate compliance with its CO<sub>2</sub> budget emissions limitation by having one CO<sub>2</sub> allowance in its compliance account for every ton of CO<sub>2</sub> that it emits in a control period, by the allowance transfer deadline for that control period.

(COMAR 26.09.02.03E(1))

- (2) The following CO<sub>2</sub> allowances may be deducted from a compliance account for purposes of complying with a budget source's CO<sub>2</sub> budget emissions limitation for a certain control period

(a) CO<sub>2</sub> allowances that are not CO<sub>2</sub> offset allowances and are identified as allowances falling within a prior control period or the same control period for which the allowances are deducted;

(b) CO<sub>2</sub> allowances that are held or transferred into the CO<sub>2</sub> budget source's compliance account as of the CO<sub>2</sub> allowance transfer deadline for that control period;

(c) CO<sub>2</sub> offset allowances that are available to be deducted for compliance during a control period may not exceed the following:

(i) 3.3 percent;

(ii) 5 percent, if the Department determines that there has been a Stage 1 trigger event; and

(iii) 10 percent, if the Department determines that there has been a Stage 2 trigger event.

(COMAR 26.09.02.03E(2)(a)-(c))

- (3) The Department shall deduct CO<sub>2</sub> allowances from the CO<sub>2</sub> budget source's compliance account until the number of CO<sub>2</sub> allowances deducted equals the number of tons of total CO<sub>2</sub> emissions, less any CO<sub>2</sub> emissions attributable to the burning of eligible biomass.

(COMAR 26.09.02.03E (3))

- (4) The identification of available CO<sub>2</sub> allowances for compliance deduction by serial number or by default is as follows:

(a) The CO<sub>2</sub> authorized account representative for a source's compliance account may request that specific CO<sub>2</sub> allowances, identified by serial number for a control period, be deducted; and

(b) In the absence of an identification or in the case of a partial identification of available CO<sub>2</sub> allowances by serial number, the Department shall deduct CO<sub>2</sub> allowances for a control period in the following descending order:

(i) For the first control period, all CO<sub>2</sub> allowances purchased by direct sale from the Department during years 2009, 2010, and 2011 resulting from the occurrence of the \$7 auction clearing price;

(ii) All CO<sub>2</sub> allowances for a control period allocated to a CO<sub>2</sub> budget unit from the Long Term Contract Set-aside Account or the Clean Generation Set-aside Account;



- (iii) Subject to the relevant compliance deduction limitations identified in §E(2)(c) of this regulation, any CO<sub>2</sub> offset allowances transferred and recorded in the compliance account, in chronological order; and
- (iv) Any CO<sub>2</sub> allowances, other than those identified in §E(4)(b)(i) — (iii) of this regulation, that are available for deduction in the order they were recorded.

(COMAR 26.09.02.03E (4)(a)-(b))

(5) Deductions for Excess Emissions:

- (a) If a CO<sub>2</sub> budget source has excess emissions, the Department shall deduct, from the CO<sub>2</sub> budget source's compliance account, CO<sub>2</sub> allowances from allocation years that occur after the control period in which the source has excess emissions that equal three times the number of the source's excess emissions.
- (b) If a source has insufficient CO<sub>2</sub> allowances to cover three times the number of the source's excess emissions, the source shall immediately transfer sufficient allowances into its compliance account.
- (c) CO<sub>2</sub> offset allowances may not be deducted to account for the source's excess emissions.
- (d) Any CO<sub>2</sub> allowance deduction does not affect the liability of the owners or operators of the CO<sub>2</sub> budget units at the source for any fine, penalty, or assessment, or their obligation to comply with any other remedy, for the same violation, as ordered under applicable State law. (COMAR 26.09.02.03E (5)(a)-(d))

(6) The following guidelines apply in assessing fines, penalties, or other obligations:

- (a) For purposes of determining the number of days of violation, if a CO<sub>2</sub> budget unit has excess emissions for a control period, each day in the control period constitutes a day of violation unless the owners or operators of the unit can demonstrate to the satisfaction of the Department that a lesser number of days should be considered; and
- (b) The Department shall consider the amount of excess emissions in determining the severity of the violation. (COMAR 26.09.02.03E (6)(a)-(b))

(7) If the CO<sub>2</sub> budget source's compliance account no longer exists, the CO<sub>2</sub> allowances shall be deposited in a general account selected by the owner or operator of the CO<sub>2</sub> budget source. (COMAR 26.09.02.03E (7))

(8) Adjustments and Errors:

- (a) The Department may review and conduct independent audits concerning any submission under this subtitle and make appropriate adjustments of the information, if necessary.
- (b) The Department may correct any error in any account and, within 10 business days of making any correction, notify the CO<sub>2</sub> authorized account representative for the account (COMAR 26.09.02.03E (8)(a)-(b))

### **(C) Applicability and Administration**

- (1) The requirements of this permit apply to the owner or operator of a CO<sub>2</sub> budget unit. When this

permit establishes a requirement such as the submittal of a permit application, a report, a request for allowances or transfer of allowances, or general information, these actions shall be achieved through the authorized account representative on behalf of the owner or operator of the affected CO<sub>2</sub> budget source or unit.

(COMAR 26.09.02.02A)

- (2) The requirements of this subtitle are effective on January 1, 2009 or, for new CO<sub>2</sub> budget units, on the day on which the unit commences operation.

(COMAR 26.09.02.02C).

- (3) The provisions of this permit do not exempt or otherwise relieve the owners or operators of a CO<sub>2</sub> budget source from achieving compliance with any other provision of applicable State and federal laws and regulations.

(COMAR 26.09.02.02D).

- (4) Unless otherwise stated under this subtitle, any time period scheduled to begin:

(a) On the occurrence of an act or event, begins on the day the act or event occurs; and

(b) Before the occurrence of an act or event, is computed so that the period ends the day before the act or event occurs.

(COMAR 26.09.02.02F)

- (5) Unless otherwise stated, if the final day of any time period for performing an act required by this subtitle falls on a weekend or on a State or federal holiday, the time period is extended until or to the next business day.

(COMAR 26.09.02.02G)

## **(D) Permit Requirements**

- (1) The account representative or designate alternate account representative) of each affected unit at a source, (every fossil fuel fired unit with a nameplate capacity of 25 MW or greater) for that source shall comply with the following:

(a) The CO<sub>2</sub> authorized account representative for the source shall submit an initial CO<sub>2</sub> budget permit application by October 1, 2008, or 12 months before the date on which the CO<sub>2</sub> budget source, or a new unit at the source, commences operation.

(COMAR 26.09.02.04A (2));

(b) The CO<sub>2</sub> budget permit application shall include the following in a format prescribed by the Department: 1) the identification of the CO<sub>2</sub> budget source; 2) facility name and the ORIS (Office of Regulatory Information Systems) or facility code assigned to the source by the Energy Information Administration of the U. S. Department of Energy, if applicable; 3) each CO<sub>2</sub> budget unit at the source; and 4) other information required by the Department.

(COMAR 26.09.02.04A (3))

(c) The authorized account representative for the source shall submit a complete application for the renewal of an existing CO<sub>2</sub> budget permit on forms provided by the Department not later than 90 days before the expiration of the current CO<sub>2</sub> budget permit.

(COMAR 26.09.02.04 E)

- (2) The owners and operators of each affected source shall have a CO<sub>2</sub> Budget Trading Program permit (the “budget permit”) issued by the Department.  
(COMAR 26.09.02.04A (1)).
- (3) The CO<sub>2</sub> budget permit issued by the Department shall be separate but attached to the budget source’s Part 70 permit.  
(COMAR 26.09.02.04B)
- (4) A CO<sub>2</sub> budget permit expires 5 years from the date of issuance by the Department, unless an earlier expiration date is specified in the permit.  
(COMAR 26.09.02.04D)

### **(E) Monitoring, Initial Certification and Recertification Requirements**

- (1) For each control period in which a CO<sub>2</sub> budget source is subject to the CO<sub>2</sub> budget emissions limitation, the CO<sub>2</sub> authorized account representative of the source shall submit a compliance certification report by the March 1 following the relevant control period.  
(COMAR 26.09.02.05 A (1))
- (2) The CO<sub>2</sub> authorized account representative shall include in the compliance certification report the following:
  - (a) Identification of the source and each CO<sub>2</sub> budget unit at the source;
  - (b) At the CO<sub>2</sub> authorized account representative's option, the serial numbers of the CO<sub>2</sub> allowances that are to be deducted from the source’s compliance account for the control period, including the serial numbers of any CO<sub>2</sub> offset allowances that are to be deducted subject to applicable limitations; and
  - (c) The compliance certification required by Condition (d)(3) of this permit.  
(COMAR 26.09.02.05 A (2))
- (3) In the compliance certification report, the CO<sub>2</sub> authorized account representative shall certify whether the source and each CO<sub>2</sub> budget unit at the source for which the compliance certification is submitted was operated during the control period in compliance with the requirements of this subtitle, including:
  - (a) Whether each CO<sub>2</sub> budget unit at the source was operated in compliance with the CO<sub>2</sub> budget emissions limitation;
  - (b) Whether the monitoring plan applicable to each unit at the source has been maintained to reflect the actual operation and monitoring of the unit and contains all information necessary to track CO<sub>2</sub> emissions from the unit;
  - (c) Whether all CO<sub>2</sub> emissions from each unit at the source were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including: identification of all conditional data reported in the quarterly reports; and if

conditional data were reported, whether the status of all conditional data has been resolved and all necessary quarterly report resubmissions have been made;

- (d) Whether the basis for certification or for using an excepted monitoring method or approved alternative monitoring method has changed;
  - (e) If a change is required to be reported, include: the nature and reasons for the change; when the change occurred; and how the unit's compliance status was determined after the change, including the method used to determine emissions when a change mandated the need for monitor recertification.  
(COMAR 26.09.02.05A (3) (a)-(e))
- (4) The Department, at its discretion, may review and conduct independent audits of any compliance certification or other submission required by this permit.  
(COMAR 26.09.02.05 B (1))
  - (5) The Department may deduct CO<sub>2</sub> allowances from, or transfer CO<sub>2</sub> allowances to, a compliance account to correct errors in the account or to accurately reflect CO<sub>2</sub> emissions, based on the information in the compliance certification or other submissions.  
(COMAR 26.09.02.05 B (2))
  - (6) The owner or operator of a CO<sub>2</sub> budget unit shall:
    - (a) Install monitoring systems to monitor CO<sub>2</sub> concentration, stack gas flow rate, oxygen concentration, heat input, and fuel flow rate;
    - (b) Install all monitoring systems in accordance with 40 CFR Part 75, except for equation G-1 in Appendix G (attached at the end of this permit); and
    - (c) Record, report, and verify the data from the monitoring systems.  
(COMAR 26.09.02.10A (1) (a)-(c))
  - (7) Install and certify the monitoring system on or before the following dates:
    - (a) For a CO<sub>2</sub> budget unit that commences commercial operation before July 1, 2008, the owner or operator shall comply on or before January 1, 2009; and
    - (b) For a CO<sub>2</sub> budget unit that commences commercial operation or constructs a new stack or flue on or after July 1, 2008, the owner or operator shall comply by January 1, 2009, or 90 operating days after the date on which the unit commences commercial operation.  
(COMAR 26.09.02.10 A (1) (d))
  - (8) The owner or operator of a CO<sub>2</sub> budget unit that does not meet the applicable compliance date shall, in accordance with the provisions in 40 CFR §75.31(b)(2) or (c)(3), or §2.4 of Appendix D, determine, record, and report maximum potential or, as appropriate, minimum potential for the following:
    - (a) CO<sub>2</sub> concentration;

- (b) CO<sub>2</sub> emissions rate;
  - (c) Stack gas moisture content;
  - (d) Fuel flow rate; and
  - (e) Any other parameter required to determine CO<sub>2</sub> mass emissions.  
(COMAR 26.09.02.10 A (2) (a)-(e))
- (9) The owner or operator of a CO<sub>2</sub> budget unit that does not meet the applicable compliance date for any monitoring system shall determine, record, and report substitute data using the applicable missing data procedures in 40 CFR Part 75 Subpart D, or Appendix D, instead of the maximum potential values or, as appropriate, minimum potential values for a parameter, if the owner or operator demonstrates that there is continuity between the data streams for that parameter before and after the construction or installation.  
(COMAR 26.09.02.10 A (3))
- (10) An owner or operator of a CO<sub>2</sub> budget unit or a non-CO<sub>2</sub> budget unit monitored under 40 CFR §75.72 (b) (2) (ii) may not:
- (a) Use any alternative monitoring system, alternative reference method, or any other alternative for the required continuous emissions monitoring system without having obtained prior written approval from the Department;
  - (b) Operate the unit so as to discharge, or allow to be discharged, CO<sub>2</sub> emissions to the atmosphere without accounting for all emissions in accordance with the applicable provisions of this chapter and 40 CFR Part 75;
  - (c) Disrupt the operation of the CEMS, any portion of the CEMS, or any other approved emissions monitoring method, and thereby avoid monitoring and recording CO<sub>2</sub> mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed; or
  - (e) Permanently discontinue use of the approved CEMS unless the owner or operator monitors emissions with a system approved in accordance with this chapter and 40 CFR Part 75.  
(COMAR 26.09.02.10 A (4) (a)-(e))
- (11) For purposes of this subtitle only, the owner or operator of a CO<sub>2</sub> budget unit is exempt from demonstrating compliance with the initial certification requirements of 40 CFR §75.20 for a monitoring system if the following conditions are met:
- (a) The monitoring system has been previously certified in accordance with 40 CFR §75.20; and
  - (b) The applicable quality assurance and quality-control requirements of 40 CFR §75.21 and Appendix B and Appendix D of 40 CFR Part 75 are fully met for the certified monitoring system.  
(COMAR 26.09.02.10 B (1) (a)-(b))

- (12) The recertification provisions of this regulation apply to a monitoring system exempt from the initial certification requirements of this regulation.  
(COMAR 26.09.02.10 B (2))
- (13) If the Department has previously approved a petition under 40 CFR §75.72(b)(2)(ii) or 40 CFR §75.16(b)(2)(ii)(B) pursuant to 40 CFR §75.13 for apportioning the CO<sub>2</sub> emissions rate measured in a common stack or a petition under 40 CFR §75.66 for an alternative requirement in 40 CFR Part 75, the CO<sub>2</sub> authorized account representative shall resubmit the petition to the Department to determine whether the approval applies under this chapter.  
(COMAR 26.09.02.10 B (3))
- (14) The owner or operator of a CO<sub>2</sub> budget unit shall comply with the initial certification and recertification procedures for a CEMS and an excepted monitoring system under 40 CFR Part 75, Appendix D.  
(COMAR 26.09.02.10 B (4))
- (15) The owner or operator of a unit that qualifies to use the low mass emissions excepted monitoring methodology in 40 CFR §75.19 or that qualifies to use an alternative monitoring system under 40 CFR Part 75, Subpart E, shall comply with this regulation.  
(COMAR 26.09.02.10 B (5))
- (16) When the owner or operator replaces, modifies, or changes a CEMS that the Department determines significantly affects the ability of the system to accurately measure or record CO<sub>2</sub> mass emissions or to meet the quality assurance and quality control requirements of 40 CFR §75.21 or Appendix B, the owner or operator shall recertify the monitoring system according to 40 CFR §75.20(b).  
(COMAR 26.09.02.10 C (1))
- (17) When the owner or operator replaces, modifies, or changes the flue gas handling system or the unit's operation in a manner that the Department determines has significantly changed the flow or concentration profile, the owner or operator shall recertify the CEMS according to 40 CFR §75.20(b).  
(COMAR 26.09.02.10 C (2))
- (18) Approval Process for Initial Certifications and Recertification. The procedures in 40 CFR §75.20(b)(5) and (g)(7) apply for recertification. The CO<sub>2</sub> authorized account representative shall submit to the Department:
- (a) A written notice of the dates of certification; and
  - (b) A recertification application for each monitoring system, including the information specified in 40 CFR §75.63.  
(COMAR 26.09.02.10 C(3) (a)-(b))
- (19) Provisional certification data for a monitor shall be:
- (a) Determined in accordance with 40 CFR §75.20(a)(3);

- (b) A provisionally certified monitor may be used for a period not to exceed 120 days after receipt of the complete certification application for the monitoring system or component; and
- (c) Data measured and recorded by the provisionally certified monitoring system or component is considered valid quality assured data, retroactive to the date and time of provisional certification, if the Department does not issue a notice of disapproval within 120 days of receipt of the complete certification application.  
(COMAR 26.09.02.10 C (4) (a)-(c))
- (20) The Department shall issue a written notice of approval or disapproval of the certification application to the owner or operator within 120 days of receipt of the complete certification application.  
(COMAR 26.09.02.10 D (1))
- (21) If the Department does not issue the notice within the 120-day period, each monitoring system that meets the applicable performance requirements of 40 CFR Part 75 and is included in the certification application shall be deemed certified for use.  
(COMAR 26.09.02.10 D (2))
- (22) If the certification application is complete and shows that each monitoring system meets the applicable performance requirements of 40 CFR Part 75, the Department shall issue a written notice of approval of the certification application within 120 days of receipt.  
(COMAR 26.09.02.10 D (3))
- (23) If the certification application is not complete, the Department shall issue a written notice of incompleteness that sets a reasonable date by which the CO<sub>2</sub> authorized account representative is to submit the additional information required to complete the certification application.  
(COMAR 26.09.02.10 D (4))
- (24) If the CO<sub>2</sub> authorized account representative does not comply with the notice of incompleteness by the specified date, the Department may issue a notice of disapproval.  
(COMAR 26.09.02.10 D (5))
- (25) If the Department issues a notice of disapproval of a certification application or a notice of disapproval of certification status, the owner or operator shall substitute the following values for each disapproved monitoring system, for each hour of unit operation during the period of invalid data beginning with the date and hour of provisional certification and continuing until the time, date, and hour specified under 40 CFR §75.20(a)(5)(i) or 75.20(g)(7):
- (a) For units using or intending to monitor for CO<sub>2</sub> mass emissions using heat input or for units using the low mass emissions excepted methodology under 40 CFR §75.19, the maximum potential hourly heat input of the unit; or
- (b) For units intending to monitor for CO<sub>2</sub> mass emissions using a CO<sub>2</sub> pollutant concentration monitor and a flow monitor, the maximum potential concentration of CO<sub>2</sub> and the maximum potential flow rate of the unit under 40 CFR Part 75, Appendix A, §2.1.  
(COMAR 26.09.02.10 D (6) (a)-(b))

(26) The CO<sub>2</sub> authorized account representative shall submit a notification of certification retest dates and a new certification application. The owner or operator shall repeat all certification tests or other requirements that were failed by the monitoring system, as indicated in the Department's notice of disapproval, not later than 30 operating days after the date of issuance of the notice of disapproval.

(COMAR 26.09.02.10 D (7))

(27) The owner or operator of a unit qualified to use the low mass emissions excepted methodology under 40 CFR §75.19 shall meet the applicable certification and recertification requirements of 40 CFR §§75.19(a) (2) and 75.20(h).

(COMAR 26.09.02.10 E (1))

(28) If the owner or operator of this unit elects to certify a fuel flow meter system for heat input determinations, the owner or operator shall also meet the certification and recertification requirements in 40 CFR §75.20(g).

(COMAR 26.09.02.10 E (2))

(29) Certification and Recertification Procedures for Alternative Monitoring Systems. For each unit for which the owner or operator intends to use an alternative monitoring system approved by the Department, 40 CFR Part 75, Subpart E, shall be used to comply with the applicable notification and application procedures of 40 CFR §75.20(f).

(COMAR 26.09.02.10 F)

(30) When any monitoring system fails to meet the quality assurance and quality control requirements or data validation requirements of 40 CFR Part 75, data shall be substituted using the applicable procedures in 40 CFR Part 75, Subpart D, Appendix D.

(COMAR 26.09.02.10 G (1))

(31) Whenever both an audit of a monitoring system and a review of the initial certification or recertification application reveal that any monitoring system should not have been certified or recertified because it did not meet a particular performance specification or the applicable provisions of 40 CFR Part 75, both at the time of the initial certification or recertification application submission and at the time of the audit, the Department shall issue a notice of disapproval of the certification status of the monitoring system. By issuing the notice of disapproval, the certification status of the monitoring system is prospectively revoked.

(COMAR 26.09.02.10 G (2))

(32) The data measured and recorded by the monitoring system may not be considered valid quality-assured data from the date of issuance of the notification of the revoked certification status.

(COMAR 26.09.02.10 G (3))

## **(F) Record Keeping and Reporting Requirements**

(1) The CO<sub>2</sub> authorized account representative shall comply with all record-keeping and reporting requirements in COMAR 26.09.02.10 and the applicable record-keeping and reporting requirements under 40 CFR §75.73.

(COMAR 26.09.02.11 A)



- (2) The CO<sub>2</sub> authorized account representative shall submit quarterly reports as described below in this section.  
(COMAR 26.09.02.11 B (1))
- (3) The report shall contain the CO<sub>2</sub> mass emissions data for the CO<sub>2</sub> budget unit in an electronic format, unless otherwise required by the Department, for each calendar quarter beginning with:
  - (a) The calendar quarter covering January 1, 2009 — March 31, 2009, for a unit that commences commercial operation before July 1, 2008; or
  - (b) For a unit commencing commercial operation on or after July 1, 2008, the calendar quarter corresponding to the earlier of the following dates: date of provisional certification; or applicable deadline for initial certification.
  - (c) If the quarter is the third or fourth quarter of 2008, reporting shall commence in the quarter covering January 1, 2009 through March 31, 2009.  
(COMAR 26.09.02.11 B (2) (a)-(c))
- (4) The CO<sub>2</sub> authorized account representative shall submit each quarterly report within 30 days following the end of the calendar quarter covered by the report and in accordance with 40 CFR Part 75, Subpart H, §75.64 and 40 CFR Part 75, Subpart G except for the opacity, NO<sub>x</sub> and SO<sub>2</sub> provisions.  
(COMAR 26.09.02.11 B (3))
- (5) The CO<sub>2</sub> authorized account representative shall submit a compliance certification in support of each quarterly report. The certification shall state that:
  - (a) The monitoring data submitted were recorded in accordance with the applicable requirements of this chapter and 40 CFR Part 75, including the quality assurance procedures and specifications;
  - (b) For a unit with add-on CO<sub>2</sub> emissions controls and for all hours where data are substituted in accordance with 40 CFR §75.34(a)(1) , the add-on emissions controls were operating within the range of parameters listed in the quality assurance and quality control program under 40 CFR Part 75, Appendix B, and the substitute values do not systematically underestimate CO<sub>2</sub> emissions; and
  - (c) The CO<sub>2</sub> concentration values substituted for missing data under 40 CFR Part 75, Subpart D, do not systematically underestimate CO<sub>2</sub> emissions.  
(COMAR 26.09.02.11 B (4) (a)-(c))
- (6) The CO<sub>2</sub> authorized account representative of a CO<sub>2</sub> budget unit may submit a petition to the Department under 40 CFR §75.66 requesting approval to apply an alternative to any requirement of this chapter.  
(COMAR 26.09.02.11 C)
- (7) The CO<sub>2</sub> authorized account representative or alternate CO<sub>2</sub> authorized account representative of a CO<sub>2</sub> budget unit that burns eligible biomass as a compliance mechanism under this chapter shall report the following information for each calendar quarter:

- (a) For each shipment of solid eligible biomass fuel fired at the CO<sub>2</sub> budget unit:
    - (i) Total eligible biomass fuel input, on an as-fired basis, in pounds; and
    - (ii) The moisture content, on an as-fired basis, as a fraction of weight;
  - (b) For each distinct type of gaseous eligible biomass fuel fired at the CO<sub>2</sub> budget unit:
    - (i) The density of the biogas, on an as-fired basis, in pounds per standard cubic foot; and
    - (ii) The moisture content of the biogas, as a fraction by total weight;
  - (c) For each distinct type of eligible biomass fuel fired at the CO<sub>2</sub> budget unit:
    - (i) The dry basis carbon content of the fuel type, as a fraction by dry weight;
    - (ii) The dry basis higher heating value, in MMBtu per dry pound;
    - (iii) The total dry basis eligible biomass fuel input, in pounds;
    - (iv) The total eligible biomass fuel heat input; and
    - (v) Chemical analysis, including heat value and carbon content;
  - (d) The total amount of CO<sub>2</sub> emitted from the CO<sub>2</sub> budget unit due to firing eligible biomass fuel, in tons, calculated as in §D(2)(b) of this regulation;
  - (e) The total heat input to the CO<sub>2</sub> budget unit due to firing eligible biomass fuel, in MMBtu, calculated below; and
  - (f) Description and documentation of monitoring technology and fuel sampling methodology employed, including sampling frequency.  
(COMAR 26.09.02.11 D (1) (a)-(f))
- (8) An owner or operator of a CO<sub>2</sub> budget unit shall calculate and submit on a quarterly basis the total dry weight for each distinct type of eligible biomass fired by the CO<sub>2</sub> budget unit during the reporting quarter:

- (a) For solid eligible biomass fuel, determined as follows:

$$F_j = \sum_{i=1}^m (1 - M_i) x F_i$$

where:

- (i) F<sub>j</sub> = Total eligible biomass dry basis fuel input (pounds) for fuel type j;
- (ii) F<sub>i</sub> = Eligible biomass as fired fuel input (pounds) for fired shipment i;
- (iii) M<sub>i</sub> = Moisture content (fraction) for fired shipment i;
- (iv) i = fired fuel shipment;
- (v) j = fuel type; and

(vi) m = number of shipments.

(b) For gaseous eligible biomass fuel, as determined as follows:

$$F_j = D_j \times V_j \times (1 - M_j)$$

where:

- (i) F<sub>j</sub> = Total eligible biomass dry basis fuel input (pounds) for fuel type j;
- (ii) D<sub>j</sub> = Density of biogas (pounds/scf) for fuel type j;
- (iii) V<sub>j</sub> = Total volume (scf) for fuel type j;
- (iv) M<sub>j</sub> = Moisture content (fraction) for fuel type j; and
- (v) j = fuel type  
(COMAR 26.09.02.11 D (2) (a)-(c))

(9) The amount of CO<sub>2</sub> emissions that is produced from the firing of eligible biomass for any full calendar quarter, during which either no fuel other than eligible biomass is combusted or during which fuels other than eligible biomass are combusted, is determined as follows:

$$CO_2 \text{ tons} = \sum_{j=1}^n F_j \times C_j \times O_j \left( \frac{44 \left( \frac{g}{mol CO_2} \right)}{12 \left( \frac{g}{mol C} \right)} \right) (0.0005)$$

where:

- (a) CO<sub>2</sub> tons = CO<sub>2</sub> emissions due to firing of eligible biomass for the reporting quarter;
- (b) F<sub>j</sub> = Total eligible biomass dry basis fuel input (pounds) for fuel type j, as calculated in §D(2)(a) of this regulation;
- (c) C<sub>j</sub> = Carbon fraction (dry basis) for fuel type j;
- (d) O<sub>j</sub> = Oxidation factor for eligible biomass fuel type j, derived for solid fuels based on the ash content of the eligible biomass fired and the carbon content of this ash or for gaseous eligible biomass fuels, a default oxidation factor of 0.995 may be used;

$$(e) \frac{44 \left( \frac{g}{mol CO_2} \right)}{12 \left( \frac{g}{mol C} \right)}$$

= The number of tons of carbon dioxide that are created when one ton of carbon is combusted;

- (f) 0.0005 = The number of short tons which is equal to one pound;
- (g) j = Fuel type; and
- (h) n = number of distinct fuel types.  
(COMAR 26.09.02.11 D (3))

(10) Heat input due to firing of eligible biomass for each quarter shall be determined as follows:

- (a) For each distinct fuel type:

$$H_j = F_j \times HHV_j$$

where:

- (i) H<sub>j</sub> = Heat input (MMBtu) for fuel type j;
- (ii) F<sub>j</sub> = Total eligible biomass dry basis fuel input (pounds) for fuel type j;
- (iii) HHV<sub>j</sub> = Higher heating value (MMBtu/pound), dry basis, for fuel type j, as determined through chemical analysis;
- (iv) j = Fuel type.

(b) For all fuel types:

$$\text{HeatInputMMBtu} = \sum_{j=1}^n H_j$$

where:

- (i) H<sub>j</sub> = Heat input (MMBtu) for fuel type j;
- (ii) j = fuel type; and
- (iii) n = number of distinct fuel types.

Fuel sampling methods and fuel sampling technology shall be consistent with the New York State Renewable Portfolio Standard Biomass Guidebook, May 2006.

(COMAR 26.09.02.11D(4) & D(5))

(11) A CO<sub>2</sub> budget unit shall submit to the Department the megawatt-hour value and a statement certifying that the megawatt-hour of electrical output reported reflects the total actual electrical output for all CO<sub>2</sub> budget units at the facility used by the independent system operator (ISO) to determine settlement resources of energy market participants.

(COMAR 26.09.02.11 E (1))

(12) A CO<sub>2</sub> budget unit shall report gross hourly megawatts to the Department in the same electronic data report (EDR) for gross output as submitted to the EPA Administrator, for the operating time in the hour, added for all hours in a year.

(COMAR 26.09.02.11 E (2))

(13) A CO<sub>2</sub> budget unit shall submit the net electrical output to the Department in accordance with this regulation. A CO<sub>2</sub> budget source whose electrical output is not used in the independent system operator (ISO) energy market settlement determinations shall propose a method for quantification of net electrical output.

(COMAR 26.09.02.11 E (3))

(14) For reporting of net steam output a CO<sub>2</sub> budget source:

(a) Selling steam shall use billing meters to determine net steam output or an alternative method to measure net steam output approved by the Department.

(b) If data for steam output is not available, the CO<sub>2</sub> budget source may report heat input, substituting useful steam output for steam output.

(COMAR 26.09.02.11 E (4) (a)-(b))

- (15) Each CO<sub>2</sub> budget source shall submit an output monitoring plan with a description and diagram that include the following:
- (a) If the CO<sub>2</sub> budget unit monitors net electric output, the diagram shall contain all CO<sub>2</sub> budget units and all generators served by each CO<sub>2</sub> budget unit and the relationship between CO<sub>2</sub> budget units and generators;
  - (b) If a generator served by a CO<sub>2</sub> budget unit is also served by a nonaffected unit, the nonaffected unit and its relationship to each generator shall be indicated on the diagram;
  - (c) The diagram shall indicate where the net electric output is measured and include all electrical inputs and outputs to and from the plant;
  - (d) If net electric output is determined using a billing meter, the diagram shall show each billing meter used to determine net sales of electricity and show that all electricity measured at the point of sale is generated by the CO<sub>2</sub> budget units;
  - (e) If the CO<sub>2</sub> budget unit monitors net thermal output, the diagram shall indicate all steam or hot water coming into the net steam system, including steam from CO<sub>2</sub> budget units and nonaffected units, and all exit points of steam or hot water from the net steam system;
  - (f) Each input and output stream shall have an estimated temperature, pressure and phase indicator, and an enthalpy in Btu per pound;
  - (g) The diagram of the net steam system shall identify all useful loads, house loads, parasitic loads, any other steam loads, and all boiler feedwater returns;
  - (h) The diagram shall represent all energy losses in the system as either usable or unusable losses;
  - (i) The diagram shall indicate all flow meters, temperature or pressure sensors, or other equipment used to calculate gross thermal output; and
  - (j) If a sales agreement is used to determine net thermal output, the diagram shall show the monitoring equipment used to determine the sales of steam.  
(COMAR 26.09.02.11 F (2) (a)-(j))
- (16) The description of the output monitoring system shall include:
- (a) A written description of the output system and the equations used to calculate output, and, for net thermal output systems, descriptions and justifications of each useful load;
  - (b) A detailed description of all quality assurance and quality control activities that will be performed to maintain the output system; and
  - (c) Documentation supporting any output value to be used as a missing data value if there are periods of invalid output data.

- (d) The missing data output value shall be either zero or an output value that is likely to be lower than a measured value and approved as part of the required monitoring plan.  
(COMAR 26.09.02.11 F (3) (a)-(b))
- (17) A certification statement shall be submitted by the CO<sub>2</sub> authorized account representative stating that either:
- (a) The output monitoring system consists entirely of billing meters; or
- (b) The output monitoring system meets one of the accuracy requirements for nonbilling meters.  
(COMAR 26.09.02.11 G (1) (a)-(b))
- (18) The billing meter shall record the electric or thermal output. Any electric or thermal output values reported shall be the same as the values used in billing for the output.  
(COMAR 26.09.02.11 G (2))
- (19) For nonbilling meters, either the output monitoring system shall meet an accuracy of within 10 percent of the reference value, or each component monitor for the output system shall meet an accuracy of within 3 percent of the full scale value, whichever is less stringent.  
(COMAR 26.09.02.11 G (3))
- (20) The system approach to accuracy shall include:
- (a) A determination of how the system accuracy of 10 percent is achieved using the individual components in the system; and
- (b) Data loggers and any wattmeters used to calculate the final net electric output data or any flowmeters for steam or condensate, temperature measurement devices, absolute pressure measurement devices, and differential pressure devices used for measuring thermal energy.  
(COMAR 26.09.02.11 G (4) (a)-(b))
- (21) If, upon testing a piece of output measurement equipment, it is determined that the output readings are not accurate to within 3 percent of the full scale value, then the equipment shall be repaired or replaced to meet that requirement.  
(COMAR 26.09.02.11 G (5))
- (22) Data is invalid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes the accuracy test.  
(COMAR 26.09.02.11 G (6))
- (23) Ongoing quality assurance and quality control activities shall be performed in order to maintain the output system.  
(COMAR 26.09.02.11 H (1))
- (24) If billing meters are used to determine output, quality assurance and quality control activities are not required beyond what are already performed.  
(COMAR 26.09.02.11 H (2))

- (25) Certain types of equipment such as potential transformers, current transformers, nozzle and venture type meters, and the primary element of an orifice plate only require an initial certification of calibration and do not require periodic recalibration unless the equipment is physically changed.
- (a) Pressure and temperature transmitters accompanying an orifice plate will require periodic retesting.
  - (b) For other types of equipment, the meter accuracy shall be recalibrated or verified at least once every 2 years, unless a consensus standard allows for less frequent calibrations or accuracy tests.
  - (c) For nonbilling meters, either the output monitoring system shall meet an accuracy of within 10 percent of the reference value, or each component monitor for the output system shall meet an accuracy of within 3 percent of the full scale value, whichever is less stringent.
  - (d) If, upon testing a piece of output measurement equipment, it is determined that the output readings are not accurate to within 3 percent of the full scale value, then the equipment shall be repaired or replaced to meet that requirement.  
(COMAR 26.09.02.11 H (3) (a)-(e))
- (26) If, upon testing a piece of output measurement equipment, it is determined that the output readings are not accurate to the certification value, data is invalid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes the accuracy test.
- (a) All invalid data shall be replaced by either zero or an output value that is likely to be lower than a measured value and that is approved as part of the required monitoring plan.  
(COMAR 26.09.02.11 H (4) (a)-(b))
- (27) The CO<sub>2</sub> authorized account representative shall submit annual output reports, as follows:
- (a) Data shall be sent both electronically and in hardcopy by March 1 for the immediately preceding calendar year; and  
(COMAR 26.09.02.11 I (1))
- (28) The annual report shall include unit level megawatt hours, all useful steam output, and a certification statement from the CO<sub>2</sub> authorized account representative stating the following, "I am authorized to make this submission on behalf of the owners and operators of the CO<sub>2</sub> budget sources or CO<sub>2</sub> budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."  
(COMAR 26.09.02.11 I (2))

## **(G) CO<sub>2</sub> Emission Offset Projects**

- (1) In order to qualify for the award of CO<sub>2</sub> offset allowances, the following offset projects shall satisfy all

applicable requirements identified in COMAR 26.09.03 and initially commence on or after December 20, 2005:

- (a) Landfill methane capture and destruction;
- (b) Reduction in emissions of sulfur hexafluoride (SF<sub>6</sub>);
- (c) Sequestration of carbon due to afforestation;
- (d) Reduction or avoidance of CO<sub>2</sub> emissions from natural gas, oil, or propane end-use combustion due to end-use energy efficiency; and
- (e) Avoided methane emissions from agricultural manure management operations.  
(COMAR 26.09.03.01 A (a)-(e))

**4. Permit Application (See Attachment)**



# MARYLAND DEPARTMENT OF THE ENVIRONMENT

Air and Radiation Administration / Air Quality Permits Program  
1800 Washington Boulevard, STE 720 Baltimore, MD 21230-1720  
(410) 537-3230 • 1-800-633-6101 • [www.mde.maryland.gov](http://www.mde.maryland.gov)

## MARYLAND CO<sub>2</sub> BUDGET TRADING PROGRAM PERMIT APPLICATION

Mail Form to: MDE/ARA, PO Box 2037, Baltimore, MD 21203-2037

### 1) CO<sub>2</sub> Authorized Account Representative Contact Information

Name: Cole Muller Phone: 267-234-2993  
Title: Vice President Fax: \_\_\_\_\_  
Mailing Address: 600 Hamilton Street Suite 600  
City: Allentown State: PA Zip Code: 18101 County: Lehigh

### 2) Alternate CO<sub>2</sub> Authorized Account Representative Information

Name: Edwin Much Phone: 410-787-5423  
Title: Regional Environmental Director Fax: \_\_\_\_\_  
Mailing Address: 1005 Brandon Shores Road Suite 100  
City: Baltimore State: MD Zip Code: 21226 County: Anne Arundel

### 3) CO<sub>2</sub> Budget Source Identification and Location

Name: H.A. Wagner Power Plant Phone: 410-787-5423  
Mailing Address: 3000 Brandon Shores Road  
City: Baltimore State: MD Zip Code: 21226 County: Anne Arundel

ARA Premises Identification #: 24-003-0468 ORIS ID: 001554

Facility Code Assigned by Energy Information Administration, U.S. Dept. Of Energy: 001554

### 4) CO<sub>2</sub> Budget Units at Source

Budget Unit's ARMA Registration #	Facility Name or Identifier	Installation Date
1. <u>5-0489</u>	<u>Unit 1</u>	<u>02 / 1956</u>
2. <u>3-0017</u>	<u>Unit 2</u>	<u>01 / 1959</u>
3. <u>3-0003</u>	<u>Unit 3</u>	<u>08 / 1966</u>
4. <u>4-0017</u>	<u>Unit 4</u>	<u>08 / 1972</u>
5. _____	_____	<u> / /</u>
6. _____	_____	<u> / /</u>
7. _____	_____	<u> / /</u>
8. _____	_____	<u> / /</u>
9. _____	_____	<u> / /</u>
10. _____	_____	<u> / /</u>
11. _____	_____	<u> / /</u>
12. _____	_____	<u> / /</u>

# MARYLAND CO<sub>2</sub> BUDGET TRADING PROGRAM PERMIT APPLICATION

Mail Form to: MDE/ARA, PO Box 2037, Baltimore, MD 21203-2037

## 5) Limited Industrial Exemption (Industrial Generator- Fossil Fuel Fired w/ Nameplate Capacity of 25MW or greater)

A) Is the source willing to accept a permit condition that no more than 10% of annual electrical output will be sent to the PJM grid?

YES \_\_\_\_\_ NO X

B) Is the source willing to submit a climate action plan, for approval by the Department, which addresses how the source will reduce CO<sub>2</sub> emissions through reasonably available reduction practices?

YES \_\_\_\_\_ NO X

C) If the answer to questions A and B above is yes, is the source requesting the Department to grant an exemption to the CO<sub>2</sub> Budget Trading Program?

YES \_\_\_\_\_ NO X

---

"I CERTIFY UNDER PENALTY OF LAW THAT THE INFORMATION SUBMITTED IN THIS REQUEST FOR COVERAGE IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

CO<sub>2</sub> Authorized Account Representative Signature

Name Edwin Much Date 6/28/21  
Print/Type Edwin Much



September 30, 2020

Maryland Department of the Environment  
Air and Radiation Management Administration  
Air Quality Permits Program  
1800 Washington Blvd.  
Baltimore, MD 21230

To Whom This May Concern:

Please find enclosed two (2) hard copies and one (1) compact disc copy of the Title V operating permit renewal application for Raven Power's (Raven's) Fort Smallwood Complex located at 1005 Brandon Shores Drive, Baltimore, Maryland. This application is being submitted in a timely and complete matter to qualify for a permit application shield. Currently, the facility is operating in accordance with Maryland Department of the Environmental (MDE) Title V Operating Permit No. 24-003-0468. In addition to the renewal of the permit, Raven is requesting several updates to the permit that include:

- Updating FSC-HAW-Unit 2 to a natural gas-fired unit.
- Changing annual stack testing back to biennial stack testing for Emission Sources FSC-HAW-Unit 1 and FSC-HAW-Unit 4.
- Removing lead emission testing requirements for Emission Sources FSC-BS-Unit 1, FSC-BS-Unit 2, FSC-HAW-Unit 2, and FSC-HAW-Unit 3.
- Incorporation of Consent Agreement between the Department and Raven Power Fort Smallwood, LLC. signed December 4, 2019.

This application package consists of the following parts:

- Appendix A: MDE Part 70 Permit Application for Renewal Forms
- Appendix B: Insignificant and Exempt Activities
- Appendix C: CAM Plan
- Appendix D: Process Flow Diagrams
- Appendix E: Facility Plot Plans
- Appendix F: MDE Application Completeness Checklist
- Appendix G: Tax Form
- Appendix H: Annual Emission Report (2019)
- Appendix I: Annual Compliance Certification (2019)



# Raven Power

If you have any questions or comments about the information presented in this application, please do not hesitate to contact Edwin Much at (410) 787-5423 or Ms. Melissa Sampson at (410) 787-5166.

Sincerely,

Scott Blair  
Vice President, Talen Energy

cc: Mr. Edwin Much, Talen Energy  
Ms. Melissa Sampson, Talen Energy

# TITLE V RENEWAL APPLICATION

**Raven Power / Fort Smallwood Complex**

**Prepared By:**

**TRINITY CONSULTANTS**

5320 Spectrum Drive  
Suite A  
Frederick, MD 21703  
(240) 379-7490

September 2020

Project 202101.0034





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## 1. INTRODUCTION

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Raven Power (Raven) operates the Brandon Shores and H.A. Wagner (Wagner) generating stations at a complex located at 1005 Brandon Shores Drive, Baltimore, Maryland (Fort Smallwood Complex). The Fort Smallwood Complex currently operates under Title V permit number 24-003-0468 issued by the Maryland Department of the Environment (MDE) on January 1, 2017 with an expiration date of September 30, 2021. The MDE requires the Title V renewal application submittal at least 12 months prior to the expiration date of the permit. Raven is submitting this application as a timely renewal request of its Title V permit for the Fort Smallwood Complex. In addition to the renewal of the permit, Raven is requesting several updates to the permit that include:

- ▶ Updates to Emission Unit FSC-HAW-Unit 2 fuel mix;
- ▶ Removal of obsolete or inapplicable requirements; and
- ▶ The incorporation of Consent Agreement signed on December 4, 2019.

Included in this application are all materials required by MDE for a complete Title V renewal application. This narrative also includes details of the requested updates to the Title V permit. The application is comprised of the following sections:

- ▶ Application narrative
- ▶ Appendices containing the following information:
  - Appendix A: MDE Part 70 Permit Application for Renewal Forms
  - Appendix B: Insignificant and Exempt Activities
  - Appendix C: Compliance Assurance Monitoring (CAM) Plans
  - Appendix D: Process Flow Diagrams
  - Appendix E: Facility Plot Plans
  - Appendix F: MDE Application Completeness Checklist
  - Appendix G: Tax Form
  - Appendix H: Annual Emission Report (2019)
  - Appendix I: Annual Compliance Certification (2019)

## 2. FACILITY DESCRIPTION SUMMARY

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### 2.1 Facility Overview

The Fort Smallwood Complex consists of the Brandon Shores and Wagner generating stations. The two generating stations are co-located on a 456-acre site. Emissions from both generating stations are aggregated for permitting purposes and, thus the entire complex operates under one Title V permit. The SIC code of Fort Smallwood is 4911.

### 2.2 Emission Units

A list of the emission units, along with their fuels, rated capacity, control devices and monitoring systems are summarized in Table 2-1. As the table shows, the main combustion sources at the Fort Smallwood Complex (FSC-BS-Units 1 and 2, and FSC-HAW-Units 1 through 4) are equipped with numerous emission control devices and continuous monitoring systems including both continuous emissions monitoring systems (CEMS) and continuous opacity monitoring systems (COMS). Other emission units at the Fort Smallwood Complex include two auxiliary boilers at the Brandon Shores facility, one combustion turbine at the Wagner facility, and material handling systems for gypsum, coal, limestone, and fly ash serving both facilities. The control equipment and continuous monitoring systems are driven by regulatory requirements from different regulations that are already included in the Title V permit. Details of the applicable requirements are included in Section 3B of Appendix A.

### 2.3 General Emissions Information

Potential emissions from the Fort Smallwood Complex are above the Title V major source threshold for one or more regulated pollutants under the Maryland Title V permitting program codified in the Code of Maryland Regulations, Title 26, Subtitle 11, Section 3 (COMAR 26.11.03). Therefore, the facility is classified as a major source under Title V and is required to maintain a Title V permit. The facility currently operates under Part 70 Operating Permit #24-003-0468, and this application serves as a timely renewal application for this permit.



**Table 2-1. Summary of Emission Sources, Control Equipment and Monitoring Devices**

Station	Unit ID	Emission Source	Fuel	Capacity	Control Equipment	Monitoring Device	Installation Date
Brandon Shores	FSC-BS-Unit 1	Boiler	Coal and High Carbon Fly ash with No. 2 Fuel Oil used for start-up and main burner ignition	7,128 MMBtu/hr (Each)	ESP, SCR, Hydrated Lime or Equivalent, PAC Injection, Baghouse, Scrubber (wet FGD)	NO <sub>x</sub> , SO <sub>2</sub> , CO <sub>2</sub> , PM, and Hg CEMS; COMS	May, 1984
Brandon Shores	FSC-BS-Unit 2	Boiler					May, 1991
Brandon Shores	FSC-BS-AuxBlr1	Auxiliary boiler	No. 2 Fuel Oil	145 MMBtu/hr (Each)	None	None	May, 1973
Brandon Shores	FSC-BS-AuxBlr2	Auxiliary boiler					May, 1973
Brandon Shores	FSC-BS-MH	Coal and fly ash handling	-	-	Dust controls include process enclosures, dust collectors, and water suppression	None	May, 1973
Brandon Shores	FSC-BS-LSH	Limestone handling	-	-			December, 2009
Brandon Shores	FSC-BS-GH	Gypsum handling	-	-			December, 2009
Brandon Shores	FSC-BS-QP	Two quench pumps	Diesel	500 HP (Each)	None	None	December, 2009
H.A. Wagner	FSC-HAW-Unit 1	Boiler	Natural Gas and No. 6 Fuel Oil	1,337 MMBtu/hr	ESP	NO <sub>x</sub> and CO <sub>2</sub> CEMS; COMS	February, 1956
H.A. Wagner	FSC-HAW-Unit 2	Boiler	Natural Gas	250 MMBtu/hr	SNCR, ESP	NO <sub>x</sub> , SO <sub>2</sub> , CO <sub>2</sub> and Hg CEMS; COMS	February, 1959
H.A. Wagner	FSC-HAW-Unit 3	Boiler	Coal (bituminous and/or sub-bituminous) with Natural Gas for start-up and main burner ignition	2,740 MMBtu/hr	SCR, PAC Injection, Dry sorbent injection (hydrated lime or equivalent), ESP		August, 1966
H.A. Wagner	FSC-HAW-Unit 4	Boiler	No. 6 Fuel Oil with Natural Gas for start-up and main burner ignition	4,200 MMBtu/hr	Multi-cyclone particulate control	NO <sub>x</sub> and SO <sub>2</sub> CEMS; COMS	August, 1972
H.A. Wagner	FSC-HAW-CT	Turbine	No. 2 Fuel Oil	232 MMBtu/hr	None	None	August, 1967
H.A. Wagner	FSC-HAW-MH	Coal (bituminous and/or sub-bituminous) handling system, including coal, fly-ash and dry sorbent silos	-	-	Dust controls include process enclosures, dust collectors, and water suppression	None	May, 1956
Brandon Shores	FSC-BS-EG	Emergency Generator	Diesel	670 HP	None	None	1979

## 3. REQUESTED CHANGES TO PERMIT

---

This section provides information on the changes Raven requests to the Title V permit with this renewal application. These changes are reflected in the forms in Appendix A.

### 3.1 FSC-HAW-Unit 2

FSC-HAW-Unit 2 has been changed from a coal-fired unit to a natural gas-fired unit. This change was made in response to the Consent Decree issued December 4, 2019. MDE approved this change in a letter dated July 15, 2020. A Permit to Construct application for this change is being submitted to MDE separately. The new boiler heat input rating for this unit on natural gas is 250 MMBtu/hr. The fuel change impacts the regulatory applicability for FSC-HAW-Unit 2 with regard to several federal and state standards, as follows:

1. The requirements to develop and maintain a CAM Plan are no longer applicable for this unit as burning natural gas has reduced the pre-control potential emissions to less than the Title V major source threshold for particulate matter. As such, the CAM Plan for this unit has not been included with this application.
2. The requirement for use of a continuous opacity monitoring system (COMS) per COMAR 26.11.01.10 no longer applies. According to COMAR 26.11.01.10A(1)(a), COMS are required for fuel burning equipment with rated heat input capacity of 250 MMBTU/hr or higher only if burning coal, fuel oil, tars or waste combustible fluid. Therefore, the site will no longer be required to operate the COMS on FSC-HAW-Unit 2.
3. The unit is no longer subject to the following standards:
  - a. 40 CFR 63 Subpart UUUUU (Utility MACT)
  - b. COMAR 26.11.27 (Emission Limits for Power Plants)
  - c. COMAR 26.11.38 (Control of NO<sub>x</sub> Emissions from Coal-Fired Electric Generating Units)
  - d. COMAR 26.11.09.06 (Particulate Matter Standards)
  - e. COMAR 26.11.09.07 (Sulfur Standards)
4. The unit is now subject to the following standard:
  - a. 40 CFR 63 Subpart DDDDD (Major Source Boiler MACT) as a limited-use gas-fired boiler
    - i. Raven Power is requesting a limit on the capacity factor of this unit to 10% or less to meet the definition of a limited-use boiler.
5. The unit is subject to a different NO<sub>x</sub> reasonably available control technology (RACT) limit under COMAR 26.11.09.08C(2)(c) of 0.3 pounds per million British thermal units (lb/MMBtu) instead of 0.5 lb/MMBtu under COMAR 26.11.09.08C(2)(b).

The changes in regulatory applicability due to this fuel change are reflected in the forms in Appendix A.

### 3.2 Annual Stack Testing

Raven requests that annual stack testing be changed back to biennial stack testing for Emission Sources FSC-HAW-Unit 1 and FSC-HAW-Unit 4 under Table IV-7 Section 7.2. In the last issued permit, the stack testing was required annually whereas previous permits have required testing every two years. Raven believes that biennial testing is sufficient.

### **3.3 Lead Emission Testing**

Raven requests that lead emissions testing be removed from the testing and monitoring requirements for Emission Sources FSC-BS-Unit 1, FSC-BS-Unit 2, FSC-HAW-Unit 2, and FSC-HAW-Unit 3. This one-time requirement was new in the prior permit and based on the low results from the conducted testing and that it is a state-only requirement, Raven does not believe that this testing should need to be repeated.

### **3.4 2019 Consent Agreement signed December 4, 2019**

Raven requests the incorporation of Emission Limits and Operational Limits as stated in the December 4, 2019 consent agreement between the Maryland Department of the Environment and Raven Power Fort Smallwood, LLC be added to the Title V permit as appropriate.

## **APPENDIX A. TITLE V RENEWAL APPLICATION FORMS**

---

**PART 70 PERMIT APPLICATION FOR RENEWAL**  
AIR AND RADIATION MANAGEMENT ADMINISTRATION

**Owner and Operator:**

Name of Owner or Operator: <b>Raven Power Fort Smallwood, LLC</b>		
Street Address: <b>1005 Brandon Shores Road, Suite 100</b>		
City: <b>Baltimore</b>	State: <b>MD</b>	Zip Code: <b>21226</b>
Telephone Number <b>410-787-5532</b>	Fax Number <b>410-787-5160</b>	

**Facility Information:**

Name of Facility: <b>Raven Power Fort Smallwood Complex</b>		
Street Address: <b>1005 Brandon Shores Road</b>		
City: <b>Baltimore</b>	State: <b>MD</b>	Zip Code: <b>21226</b>
Plant Manager: <b>Glenn Nilsen</b>	Telephone Number: <b>410-787-6923</b>	Fax Number:
24-Hour Emergency Telephone Number for Air Pollution Matters: <b>410-787-5531</b>		

See next page for information for facility contact for permitting issues.

**Contact for Permit Issues:**

Edwin Much  
Regional Environmental Director  
410-787-5423  
[edwin.much@talenergy.com](mailto:edwin.much@talenergy.com)

## SECTION 1. CERTIFICATION STATEMENTS

### 1. Compliance Status with Applicable Enhanced Monitoring and Compliance Certification Requirements

The emissions units identified in this application are in compliance with applicable enhanced monitoring and compliance certification requirements.

### 2. Certification of Current Compliance with All Applicable Federally Enforceable Requirements

Except for the requirements identified in Section 7 of this application, for which compliance is not achieved, I hereby certify, based on information and belief formed after reasonable inquiry, that the facility is currently in compliance with all applicable federally enforceable requirements and agree that the facility will continue to comply with those requirements during the permit term.

**You must complete a Section 7 form for each non-complying emissions unit.**

### 3. Statement of Compliance with Respect to All New Applicable Requirements Effective During the Permit Term

I hereby state, based on information and belief formed after reasonable inquiry, that the facility agrees to meet, in a timely manner, all applicable federally enforceable requirements that become effective during the permit term, unless a more detailed schedule is expressly required by the applicable requirement.

### 4. Risk Management Plan Compliance

I hereby certify that, based on information and belief formed after reasonable inquiry, that a Risk Management Plan as required under  $\square$ 112(r) of the Clean Air Act:

has been submitted;

will be submitted at a future date; or

does not need to be submitted.

5. **Statement of Truth, Accuracy, and Completeness**

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision and in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

RESPONSIBLE OFFICIAL:

X Scott M Blair  
SIGNATURE

9/29/2020  
DATE

Scott Blair

PRINTED NAME

Authorized Representative

TITLE



## SECTION 2. FACILITY DESCRIPTION SUMMARY

### 1. Major Activities of Facility

Briefly describe the major activities, including the applicable SIC Code(s) and end product(s).

**The Fort Smallwood Complex, consisting of the Brandon Shores and H.A. Wagner Generating Stations, is located in northern Anne Arundel County, on the Patapsco River, off of Fort Smallwood Road. The Complex consists of the two generating stations and a warehouse. The SIC Code for this facility is 4911.**

### 2. Facility-Wide Emissions

A. This facility is required to obtain a Part 70 Operating Permit because it is:  
Check appropriate box:

- Actual Major  
 Potential Major  
 Solid Waste Incineration Unit Requiring Permit Under § 129(e) of CAA

B. List the actual facility-wide emissions below: **(Tons in 2019)**

PM10\* 23      NOx 1130      VOC 36      SOx 2765      CO 308      HAPs 24.79

\*PM10 emissions listed represent filterable emissions only

### 3. Include With the Application:

Flow Diagrams showing all emissions units, emission points, and control devices;  
Emissions Certification Report (copy of the most recent submitted to the  
Department)

**Note: Flow Diagrams are in Appendix D and the 2019 Emissions  
Certification Report is in Appendix H of this application.**

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

**SECTION 3A-1. EMISSIONS UNIT DESCRIPTIONS**

<p>1. Emissions Unit No.: <b>FSC-BS-Unit 1</b></p> <p>1a. Date of installation (month/year): <b>05/84</b></p>	<p>2. MDE Registration No.: (if applicable) <b>3-0015</b></p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <b>Brandon Shores Unit 1 is a solid fossil fuel fired generating unit with No. 2 oil used for start-up purposes. The Unit is also capable of re-burning high carbon flyash with the solid fuel/coal that has been recovered from the flyash separation equipment on site. The re-burning of flyash was approved in an August, 2011 letter from the Maryland Public Service Commission (PSC). The emissions from Brandon Shores Unit 1 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse, and a flue gas desulfurization (FGD) system prior to being discharged through a single stack. (Emission Point: FSC-BS-Unit1-EP1)</b></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b>None</b></p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p>_____ days/year</p>													
<p>5. Fuel Consumption:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u><b>Solid fossil fuel (coal)</b></u></td> <td><u><b>&lt; 5% (Typical)</b></u></td> <td><u><b>362,965 (tons) in 2019</b></u></td> </tr> <tr> <td>2. <u><b>No 2 oil</b></u></td> <td><u><b>0.3% (limit)</b></u></td> <td><u><b>1,181,122 (gallons) in 2019</b></u></td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u><b>Solid fossil fuel (coal)</b></u>	<u><b>&lt; 5% (Typical)</b></u>	<u><b>362,965 (tons) in 2019</b></u>	2. <u><b>No 2 oil</b></u>	<u><b>0.3% (limit)</b></u>	<u><b>1,181,122 (gallons) in 2019</b></u>	3. _____	_____	_____
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3. _____	_____	_____											
<p>6. Emissions in Tons: <b>[Actual emissions in tons/yr from CY 2019 Emissions Certification Report.]</b></p> <p>A. Actual Major: _____ Potential Major: <u><b>X</b></u> (note: before control device)</p> <p>B. Actual Emissions: NOx <u><b>341</b></u> SOx <u><b>546</b></u> VOC <u><b>11</b></u></p> <p style="margin-left: 150px;">PM10 <u><b>6.60 (filterable)</b></u> HAPs <u><b>4.84</b></u></p>													

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

**SECTION 3A-2. EMISSIONS UNIT DESCRIPTIONS**

1. Emissions Unit No.: <b>FSC-BS-Unit 2</b>  1a. Date of installation (month/year): <b>05/91</b>	2. MDE Registration No.: (if applicable)  <b>3-0016</b>												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <b>Brandon Shores Unit 2 is a solid fossil fuel fired generating unit with No. 2 oil used for start-up purposes. The Unit is also capable of re-burning high carbon flyash with the solid fuel/coal that has been recovered from the flyash separation equipment on site. The re-burning of flyash was approved in an August, 2011 letter from the Maryland Public Service Commission (PSC). The emissions from Brandon Shores Unit 2 are passed through an electrostatic precipitator, an SCR system, hydrated lime or equivalent, a powdered activated carbon (PAC) injection system, a baghouse and a flue gas desulfurization (FGD) system prior to being discharged through a single stack. (Emission Point: FSC-BS-Unit2-EP1)</b>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b>None</b> General Reference: _____  Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Type(s) of Fuel</th> <th style="width:20%;">% Sulfur</th> <th style="width:30%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <b>Solid fossil fuel (coal)</b></td> <td><b>&lt; 5% (Typical)</b></td> <td><b>692,976 tons in 2019</b></td> </tr> <tr> <td>2. <b>No 2 oil</b></td> <td><b>0.3% (limit)</b></td> <td><b>1,193,337 (gallons) in 2019</b></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <b>Solid fossil fuel (coal)</b>	<b>&lt; 5% (Typical)</b>	<b>692,976 tons in 2019</b>	2. <b>No 2 oil</b>	<b>0.3% (limit)</b>	<b>1,193,337 (gallons) in 2019</b>	3. _____		
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1. <b>Solid fossil fuel (coal)</b>	<b>&lt; 5% (Typical)</b>	<b>692,976 tons in 2019</b>											
2. <b>No 2 oil</b>	<b>0.3% (limit)</b>	<b>1,193,337 (gallons) in 2019</b>											
3. _____													
6. Emissions in Tons: <b>[Actual emissions in tons/yr from CY 2019 Emissions Certification Report.]</b> A. Actual Major: _____ Potential Major: <b>X</b> (note: before control device) C. Actual Emissions: NOx <b>658</b> SOx <b>953</b> VOC <b>21</b> PM10 <b>0.092 (filterable)</b> HAPs <b>7.58</b>													

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

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**SECTION 3A-3. EMISSIONS UNIT DESCRIPTIONS**

<p>1. Emissions Unit No.: <b>FSC-BS-AuxBlr1</b></p> <p>1a. Date of installation (month/year): <b>5/73</b></p>	<p>2. MDE Registration No.: (if applicable)</p> <p style="text-align: center;"><b>4-0507</b></p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><b>#1 Auxiliary Boiler is a No. 2 oil fired boiler used for supplying steam to Brandon Shores Station. The emissions from #1 Auxiliary Boiler are discharged through a single stack. (Emission Point: FSC-BS-AuxBlr1-EP1).</b></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b><u>None</u></b></p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p style="padding-left: 150px;">_____ days/year</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: center;">% Sulfur</th> <th style="text-align: right;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td style="border-bottom: 1px solid black;">1. <b>No. 2 fuel oil</b></td> <td style="text-align: center; border-bottom: 1px solid black;"><b>less than 0.3%</b></td> <td style="text-align: right; border-bottom: 1px solid black;"><b>14,112 (gallons) in 2019</b></td> </tr> <tr> <td style="border-bottom: 1px solid black;">2. _____</td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> </tr> <tr> <td style="border-bottom: 1px solid black;">3. _____</td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <b>No. 2 fuel oil</b>	<b>less than 0.3%</b>	<b>14,112 (gallons) in 2019</b>	2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <b>No. 2 fuel oil</b>	<b>less than 0.3%</b>	<b>14,112 (gallons) in 2019</b>											
2. _____													
3. _____													
<p>6. Emissions in Tons: <b>[Actual emissions in tons/yr from CY 2019 Emissions Certification Report]</b></p> <p>A. Actual Major: _____ Potential Major: <b><u>X</u></b> (note: before control device)</p> <p>B. Actual Emissions: NOx <b><u>0.141</u></b> SOx <b><u>0.022</u></b> VOC <b><u>0.001</u></b></p> <p style="padding-left: 150px;">PM10 <b><u>0.00706 (filterable)</u></b> HAPs <b><u>5.7E-05</u></b></p>													

MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-4. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: <b>FSC-BS-AuxBlr2</b></p> <p>1a. Date of installation (month/year): <b>5/73</b></p>	<p>2. MDE Registration No.: (if applicable) <b>4-0508</b></p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):  <b>#2 Auxiliary Boiler is a No. 2 oil fired boiler used for supplying steam to Brandon Shores Station. The emissions from #2 Auxiliary Boiler are discharged through a single stack (Emission Point: FSC-BS-AuxBlr2-EP1).</b></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b>None</b></p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p>_____ days/year</p>													
<p>5. Fuel Consumption:</p> <table data-bbox="219 934 1526 1102"> <thead> <tr> <th>Type(s) of Fuel</th> <th>% Sulfur</th> <th>Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <b>No. 2 fuel oil</b></td> <td><b>less than 0.3%</b></td> <td><b>none in 2019</b></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <b>No. 2 fuel oil</b>	<b>less than 0.3%</b>	<b>none in 2019</b>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <b>No. 2 fuel oil</b>	<b>less than 0.3%</b>	<b>none in 2019</b>											
2. _____	_____	_____											
3. _____	_____	_____											
<p>6. Emissions in Tons: <b>[Actual emissions in tons/yr from CY 2019 Emissions Certification Report]</b></p> <p>A. Actual Major: _____ Potential Major: <b>X</b> (note: before control device)</p> <p>B. Actual Emissions: NOx <u><b>0.00</b></u> SOx <u><b>0.00</b></u> VOC <u><b>0.00</b></u></p> <p>PM10 <u><b>0.00 (filterable)</b></u> HAPs <u><b>0.00</b></u></p>													

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

**SECTION 3A-5. EMISSIONS UNIT DESCRIPTIONS**

1. Emissions Unit No.: <b>FSC-BS-QP</b>  1a. Date of installation (month/year): <b>12/09</b>	2. MDE Registration No.: (if applicable)  <b>9-0988</b>												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <b>The Quench Pumps are two (2) 500 HP diesel-fired internal combustion engines that are used to supply water to the flue gas desulfurization (FGD) system in case of emergencies.</b>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b><u>100 hours per calendar year operating hours for maintenance checks and readiness testing.</u></b> General Reference: <b><u>40 CFR 60.4211</u></b>  Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:40%;">Type(s) of Fuel</th> <th style="width:20%;">% Sulfur</th> <th style="width:40%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <b>Diesel</b></td> <td align="center"><b>ULSD</b></td> <td align="right"><b>1,492 (gallons) in 2019</b></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <b>Diesel</b>	<b>ULSD</b>	<b>1,492 (gallons) in 2019</b>	2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <b>Diesel</b>	<b>ULSD</b>	<b>1,492 (gallons) in 2019</b>											
2. _____													
3. _____													
6. Emissions in Tons: <b>[Actual emissions in tons/yr from CY 2019 Emissions Certification Report]</b> A. Actual Major: _____ Potential Major: <b>X</b> (note: before control device) B. Actual Emissions: NOx <b><u>0.148</u></b> SOx <b><u>0.001</u></b> VOC <b><u>0.037</u></b> PM10 <b><u>0.003 (filterable)</u></b> HAPs <b><u>0.0007</u></b>													

**SECTION 3A-6. EMISSIONS UNIT DESCRIPTIONS**

<p>1. Emissions Unit No.: <b>FSC-BS-MH</b></p> <p>1a. Date of installation (month/year): <b>5/73</b></p>	<p>2. MDE Registration No.: (if applicable) <b>6-1143</b></p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):  <b>The Brandon Shores material handling system consists of various equipment and processes to transport coal, fly ash, hydrated lime or equivalent, powdered activated carbon and other materials. There are facilities to mix coal with additives to reduce stack emissions. Equipment and processes may include unloading scoops, transfer points, storage piles, silos, bin vents, and other material handling equipment. A list of material handling equipment and processes can be found in emissions calculations in Section 5.</b></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b>None</b></p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p style="padding-left: 200px;">_____ days/year</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <b>N/A</b></td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <b>N/A</b>			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <b>N/A</b>													
2. _____													
3. _____													
<p>6. Emissions in Tons: <b>[Actual emissions in tons/yr from CY 2019 Emissions Certification Report]</b></p> <p>A. Actual Major: _____ Potential Major: _____ (note: before control device)</p> <p>B. Actual Emissions: NOx _____ SOx _____ VOC _____</p> <p style="padding-left: 100px;">PM10 <b>5.42 (filterable)</b> HAPs _____</p>													

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

**SECTION 3A-7. EMISSIONS UNIT DESCRIPTIONS**

1. Emissions Unit No.: <b>FSC-BS-LSH</b>  1a. Date of installation (month/year): <b>12/09</b>	2. MDE Registration No.: (if applicable)  <b>6-1149</b>												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <b>The Brandon Shores limestone handling system consists of various equipment and processes to handle limestone. Equipment and processes may include unloading scoops, transfer points, storage piles, silos, bin vents, and other material handling equipment. A list of limestone handling equipment and processes can be found in emissions calculations in Section 5.</b>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b>None</b> General Reference: _____ Continuous Processes: _____ hours/day _____ Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:40%; text-align: left;">Type(s) of Fuel</th> <th style="width:20%; text-align: center;">% Sulfur</th> <th style="width:40%; text-align: right;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <b>N/A</b></td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <b>N/A</b>			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <b>N/A</b>													
2. _____													
3. _____													
6. Emissions in Tons: <b>[Actual emissions in tons/yr from CY 2019 Emissions Certification Report]</b> A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NOx _____ SOx _____ VOC _____ PM10 <b>0.282 (filterable)</b> HAPs _____													



**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

**SECTION 3A-8. EMISSIONS UNIT DESCRIPTIONS**

1. Emissions Unit No.: <b>FSC-BS-GH</b>  1a. Date of installation (month/year): <b>12/09</b>	2. MDE Registration No.: (if applicable)  <b>6-1150</b>												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <b>The Brandon Shores gypsum handling system consists of various equipment and processes to handle gypsum. Equipment and processes may include unloading scoops, transfer points, storage piles, silos, bin vents, and other material handling equipment. A list of gypsum handling equipment and processes can be found in emissions calculations in Section 5.</b>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b>None</b> General Reference: _____  Continuous Processes: _____ hours/day _____ Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Type(s) of Fuel</th> <th style="width:20%;">% Sulfur</th> <th style="width:30%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <b>N/A</b></td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <b>N/A</b>			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <b>N/A</b>													
2. _____													
3. _____													
6. Emissions in Tons: <b>[Actual emissions in tons/yr from CY 2019 Emissions Certification Report]</b> A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NOx _____ SOx _____ VOC _____ PM10 <b>0.123 (filterable)</b> HAPs _____													

SECTION 3A-9. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: <b>FSC-HAW-Unit1</b> 1a. Date of installation (month/year): <b>02/56</b>	2. MDE Registration No.: (if applicable) <b>5-0489</b>												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <b>H. A. Wagner Unit 1 is a No. 6 oil or natural gas fired unit. The emissions from H.A. Wagner Unit 1 are passed through an electrostatic precipitator prior to being discharged through a single stack (Emission Point: FSC-HAW-Unit1-EP1).</b>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b>None</b> General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table border="1"> <thead> <tr> <th>Type(s) of Fuel</th> <th>% Sulfur</th> <th>Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <b>No 6 oil</b></td> <td><b>1.0% (limit)</b></td> <td><b>321,181(gallons) in 2019</b></td> </tr> <tr> <td>2. <b>Natural gas</b></td> <td><b>n/a</b></td> <td><b>274,580 MCF in 2019</b></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <b>No 6 oil</b>	<b>1.0% (limit)</b>	<b>321,181(gallons) in 2019</b>	2. <b>Natural gas</b>	<b>n/a</b>	<b>274,580 MCF in 2019</b>	3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <b>No 6 oil</b>	<b>1.0% (limit)</b>	<b>321,181(gallons) in 2019</b>											
2. <b>Natural gas</b>	<b>n/a</b>	<b>274,580 MCF in 2019</b>											
3. _____													
6. Emissions in Tons: <b>[Actual emissions in tons/yr from CY 2019 Emissions Certification Report.]</b> A. Actual Major: _____ Potential Major: <b>X</b> (note: before control device) D. Actual Emissions: NOx <b>17</b> SOx <b>15.3</b> VOC <b>0.880</b> PM10 <b>0.306 (filterable)</b> HAPs <b>1.65</b>													

**SECTION 3A-10. EMISSIONS UNIT DESCRIPTIONS**

1. Emissions Unit No.: <b>FSC-HAW-Unit2</b>  1a. Date of installation (month/year): <b>01/59</b>	2. MDE Registration No.: (if applicable)  <b>3-0017</b>												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <b>H.A. Wagner Unit 2 is a natural gas fired unit. The emissions from H.A. Wagner Unit 2 are passed through an SNCR, and an electrostatic precipitator prior to being discharged through a single stack (Emission Point: FSC-HAW-Unit2-EP1).</b>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b>None</b> General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;">Type(s) of Fuel</th> <th style="text-align: left; width: 30%;">% Sulfur</th> <th style="text-align: left; width: 30%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <b>Natural gas</b></td> <td><b>n/a</b></td> <td><b>46,710 MCF in 2019</b></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <b>Natural gas</b>	<b>n/a</b>	<b>46,710 MCF in 2019</b>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <b>Natural gas</b>	<b>n/a</b>	<b>46,710 MCF in 2019</b>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: [ <b>Actual emissions in tons/yr from CY 2019 Emissions Certification Report.</b> ] A. Actual Major: _____ Potential Major: <input checked="" type="checkbox"/> (note: before control device) E. Actual Emissions: NO <sub>x</sub> <u>31</u> SO <sub>x</sub> <u>89</u> VOC <u>0.410</u> PM <sub>10</sub> <u>2.14 (filterable)</u> HAPs <u>1.91</u>													

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

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**SECTION 3A-11. EMISSIONS UNIT DESCRIPTIONS**

1. Emissions Unit No.: <b>FSC-HAW-Unit3</b>  1a. Date of installation (month/year): <b>08/66</b>	2. MDE Registration No.: (if applicable)  <b>3-0003</b>												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <b>H.A. Wagner Unit 3 is a coal fired unit with natural gas used for start-up. The emissions from H.A. Wagner Unit 3 pass through an SCR, a dry sorbent injection (hydrated lime or equivalent), a powdered activated carbon (PAC) injection system, and an electrostatic precipitator prior to being discharged through a single stack. (Emission Point: FSC-HAW-Unit3-EP1)</b>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b>None</b> General Reference: _____ Continuous Processes: _____ hours/day      _____ days/year Batch Processes: _____ hours/batch      _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: left;">Type(s) of Fuel</th> <th style="width: 20%; text-align: center;">% Sulfur</th> <th style="width: 30%; text-align: right;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td style="border-top: 1px solid black; border-bottom: 1px solid black;">1. <b>Solid fossil fuel (coal)</b></td> <td style="border-top: 1px solid black; border-bottom: 1px solid black; text-align: center;"><b>1.0% (limit)</b></td> <td style="border-top: 1px solid black; border-bottom: 1px solid black; text-align: right;"><b>68,832 (tons) in 2019</b></td> </tr> <tr> <td style="border-bottom: 1px solid black;">2. <b>Natural gas</b></td> <td style="border-bottom: 1px solid black; text-align: center;"><b>n/a</b></td> <td style="border-bottom: 1px solid black; text-align: right;"><b>44,810 MCF in 2019</b></td> </tr> <tr> <td style="border-bottom: 1px solid black;">3. _____</td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <b>Solid fossil fuel (coal)</b>	<b>1.0% (limit)</b>	<b>68,832 (tons) in 2019</b>	2. <b>Natural gas</b>	<b>n/a</b>	<b>44,810 MCF in 2019</b>	3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <b>Solid fossil fuel (coal)</b>	<b>1.0% (limit)</b>	<b>68,832 (tons) in 2019</b>											
2. <b>Natural gas</b>	<b>n/a</b>	<b>44,810 MCF in 2019</b>											
3. _____													
6. Emissions in Tons: <b>[Actual emissions in tons/yr from CY 2019 Emissions Certification Report.]</b> A. Actual Major: _____ Potential Major: <b>X</b> (note: before control device) F. Actual Emissions: NOx <u><b>64</b></u> SOx <u><b>1122</b></u> VOC <u><b>2.22</b></u> PM10 <u><b>5.64 (filterable)</b></u> HAPs <u><b>8.46</b></u>													

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

**SECTION 3A-12. EMISSIONS UNIT DESCRIPTIONS**

1. Emissions Unit No.: <b>FSC-HAW-Unit4</b>  1a. Date of installation (month/year): <b>08/72</b>	2. MDE Registration No.: (if applicable)  <b>4-0017</b>												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <b>H.A. Wagner 4 is a No. 6 oil fired unit with natural gas used for start-up. The emissions from H.A. Wagner 4 are passed through mechanical collectors prior to being discharged through a single stack (Emission Point: FSC-HAW-Unit4-EP1).</b>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b><u>None</u></b> General Reference: _____  Continuous Processes: _____ hours/day      _____ days/year Batch Processes: _____ hours/batch      _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Type(s) of Fuel</th> <th style="width: 20%;">% Sulfur</th> <th style="width: 30%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr style="border-top: 1px solid black; border-bottom: 1px solid black;"> <td>1. <b>No 6 oil</b></td> <td align="center"><b>1.0% (limit)</b></td> <td align="right"><b>839,001 (gallons) in 2019</b></td> </tr> <tr style="border-bottom: 1px solid black;"> <td>2. <b>Natural gas</b></td> <td align="center"><b>n/a</b></td> <td align="right"><b>27,170 MCF in 2019</b></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <b>No 6 oil</b>	<b>1.0% (limit)</b>	<b>839,001 (gallons) in 2019</b>	2. <b>Natural gas</b>	<b>n/a</b>	<b>27,170 MCF in 2019</b>	3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <b>No 6 oil</b>	<b>1.0% (limit)</b>	<b>839,001 (gallons) in 2019</b>											
2. <b>Natural gas</b>	<b>n/a</b>	<b>27,170 MCF in 2019</b>											
3. _____													
6. Emissions in Tons: [ <b>Actual emissions in tons/yr from CY 2019 Emissions Certification Report.</b> ] A. Actual Major: _____ Potential Major: <b><u>X</u></b> (note: before control device) G. Actual Emissions: NOx <b><u>18</u></b> SOx <b><u>40</u></b> VOC <b><u>0.375</u></b> PM10 <b><u>1.23 (filterable)</u></b> HAPs <b><u>0.34</u></b>													

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

**SECTION 3A-13. EMISSIONS UNIT DESCRIPTIONS**

1. Emissions Unit No.: <b>FSC-HAW-CT</b> 1a. Date of installation (month/year): <b>8/67</b>	2. MDE Registration No.: (if applicable) <b>4-0007</b>												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <b>H.A. Wagner combustion turbine is a No. 2 oil fired combustion turbine used to supply "black-start" capability to H.A. Wagner and for peaking operation. The emissions from the combustion turbine are passed through a single stack (Emission Point: FSC-HAW-CT-EP1)</b>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b>None</b> General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Type(s) of Fuel</th> <th style="width:20%;">% Sulfur</th> <th style="width:30%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <b>No. 2 fuel oil</b></td> <td align="center"><b>less than 0.3%</b></td> <td align="center"><b>16,342 (gallons) in 2019</b></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <b>No. 2 fuel oil</b>	<b>less than 0.3%</b>	<b>16,342 (gallons) in 2019</b>	2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <b>No. 2 fuel oil</b>	<b>less than 0.3%</b>	<b>16,342 (gallons) in 2019</b>											
2. _____													
3. _____													
6. Emissions in Tons: <b>[Actual emissions in tons/yr from CY 2019 Emissions Certification Report]</b> A. Actual Major: _____ Potential Major: <b>X</b> (note: before control device) B. Actual Emissions: NOx <b><u>1.0</u></b> SOx <b><u>0.040</u></b> VOC <b><u>0.000</u></b> PM10 <b><u>0.005 (filterable)</u></b> HAPs <b><u>0.001</u></b>													

SECTION 3A-14. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: <b>FSC-HAW-MH</b> 1a. Date of installation (month/year): <b>05/56</b>	2. MDE Registration No.: (if applicable) <b>6-1144</b>												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <b>The H.A. Wagner material handling system consists of various equipment and processes to transport coal, fly ash, hydrated lime or equivalent, powdered activated carbon and other materials. There are facilities to mix coal with additives to reduce stack emissions. Equipment and processes may include unloading scoops, transfer points, storage piles, silos, bin vents, and other material handling equipment. A list of material handling equipment and processes can be found in emissions calculations in Section 5.</b>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b>None</b> General Reference: _____ Continuous Processes: _____ hours/day _____ Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Type(s) of Fuel</th> <th style="width: 20%;">% Sulfur</th> <th style="width: 30%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <b>N/A</b></td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <b>N/A</b>			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <b>N/A</b>													
2. _____													
3. _____													
6. Emissions in Tons: A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NOx _____ SOx _____ VOC _____ PM10 <b>1.17 (filterable)</b> HAPs _____													

**SECTION 3A-15. EMISSIONS UNIT DESCRIPTIONS**

<p>1. Emissions Unit No.: <b>FSC-BS-EG</b></p> <p>1a. Date of installation (month/year): <b>1979</b></p>	<p>2. MDE Registration No.: (if applicable) <b>N/A</b></p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):  <b>The emergency generator is a 670 HP diesel-fired internal combustion engine installed at the facility to provide back-up power. The unit was installed in 1979.</b></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <b><u>100 hours per calendar year operating hours for maintenance checks and readiness testing.</u></b></p> <p>General Reference: <b><u>40 CFR 63.6640(f)</u></b></p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day          _____ days/year</p>													
<p>5. Fuel Consumption:</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: center;">% Sulfur</th> <th style="text-align: right;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td style="border-top: 1px solid black;">1. <b>Diesel</b></td> <td style="text-align: center; border-top: 1px solid black;"><b>less than 0.3%</b></td> <td style="text-align: right; border-top: 1px solid black;"><b>443 gallons</b></td> </tr> <tr> <td style="border-top: 1px solid black;">2. _____</td> <td style="border-top: 1px solid black;">_____</td> <td style="border-top: 1px solid black;">_____</td> </tr> <tr> <td style="border-top: 1px solid black;">3. _____</td> <td style="border-top: 1px solid black;">_____</td> <td style="border-top: 1px solid black;">_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <b>Diesel</b>	<b>less than 0.3%</b>	<b>443 gallons</b>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <b>Diesel</b>	<b>less than 0.3%</b>	<b>443 gallons</b>											
2. _____	_____	_____											
3. _____	_____	_____											
<p>6. Emissions in Tons:</p> <p>A. Actual Major: _____ Potential Major: _____ (note: before control device)</p> <p>B. Actual Emissions: NO<sub>x</sub> _____ SO<sub>x</sub> _____ VOC _____          PM<sub>10</sub> _____ HAPs _____</p>													



**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-Unit 1, FSC-BS-Unit 2

**General Reference:** COMAR 26.11.09.05A(2)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

A. Control of Visible Emissions

A1 - Fuel Burning Equipment

Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, start-up, or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference:** COMAR 26.11.09.05C, COMAR 26.11.01.10 Describe:

COMAR 26.11.09.05C allows for the discontinuation of a COM on fuel burning equipment that is equipped with a flue gas desulfurization device. If operation of the opacity monitor is discontinued, the proposed regulation requires an alternative monitoring plan to be submitted to and approved by the Department which includes a schedule for monthly Method 9 visible emissions observations.

As an alternative to the COMAR 26.11.01.10 requirement to use a COM and until an alternate monitoring plan is submitted and approved:

The Permittee shall perform a visible emission's observation using an EPA Reference Method 9 of the exhaust from the scrubber stack. The observation shall be performed once a week for one hour period of time.

If after a six month period time, no violations of the opacity limit are observed, the frequency of observation may be reduced to once per month. At any point in time that a violation of the opacity limit is observed, the observations shall return to the weekly schedule until another six month period elapses without a violation.

**Testing Reference: None Describe:**

See Monitoring Requirements.

**Record Keeping Reference: COMAR 26.11.03.06C Describe:**

The Permittee shall maintain all records of Method 9 visible emissions observations.

**Reporting Reference: COMAR 26.11.03.06C Describe:**

The Permittee shall submit to the Department results of visible emissions observations upon request.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-Unit 1, FSC-BS-Unit 2

**General Reference:** 40 CFR Part 60 Subpart D

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

A. Control of Visible Emissions:

A2 - 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS)

(b) Except as provided in paragraphs (b)(1) and (b)(2) of this section, on and after the date the initial PM performance test is completed or required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility shall not cause to be discharged into the atmosphere any gases which exhibit greater than 20 percent opacity (6- minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(1) An owner or operator of an affected facility that elects to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart is exempt from the opacity standard specified in this paragraph (b) of this section.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:   x
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** 40 CFR 60.49Da Describe:

See Particulate Matter Monitoring Requirements.

**Testing Reference:** None Describe:

See Particulate Matter Monitoring Requirements.

**Record Keeping Reference:** COMAR 26.11.06.03C, 40 CFR 60.7 Describe:

See Particulate Matter Monitoring Requirements.

**Reporting Reference: COMAR 26.11.03.06C, 40 CFR 60.45 Describe:**

See Particulate Matter Monitoring Requirements.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-Unit 1, FSC-BS-Unit 2

**General Reference:** COMAR 26.11.09.06B(3), COMAR 26.11.09.06C.

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

B. Control of Particulate Matter

B1 - Solid Fuel Burning Equipment. A person may not cause or permit particulate matter caused by the combustion of solid fuel to be discharged into the atmosphere in excess of the amounts shown in Table 1;" For these units, the maximum allowable emission of particulate matter is 0.03 gr/scfd @ 50% excess air.

Determination of Compliance (by stack test). Compliance with the particulate matter emissions standards in this regulation shall be calculated as the average of 3 test runs using EPA Test Method 5 or other United States Environmental Protection Agency test method approved by the Department

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference:** COMAR 26.11.06.03C and Condition 25-Consent Decree of June 1, 2007, COMAR 26.11.06.03C Describe:

The permittee shall use reasonable efforts to keep each PM CEMS operating and producing data whenever either Unit served by the PM CEMS is operating. Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter concentration in grains per dry standard cubic feet on a 24-hour rolling average basis, unless State or federal law or regulations require a different averaging period or different procedures, in which case, the permittee shall be subject to applicable state or federal requirements. The permittee shall maintain, in an electronic database, the average emission values recorded by each PM CEMS.

**Testing Reference:** COMAR 26.11.03.06C Describe:

The Permittee, in accordance with COMAR 26.11.01.04A(1), shall conduct annual testing using EPA Reference Methods of 40 CFR Part 60, Appendix A The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date. Note: The Permittee may

petition the Department to use any Method 5 QC/QA testing for the PM CEMS to satisfy the requirement of the annual compliance stack test.

**Record Keeping Reference: COMAR 26.11.06.03C Describe:**

The Permittee shall operate and maintain a PM CEMS to produce valid data whenever a Unit is operating. Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter concentration in grains per dry standard cubic feet on a six hour rolling average.

**Reporting Reference: COMAR 26.11.01.04A COMAR 26.11.03.06C Describe:**

The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to test and a notice of intent to test at least 10 days prior to the scheduled test date. The Permittee shall submit the results of stack tests in a final report within 60 days from test completion.

The Permittee shall report to the Department all periods of excess emissions in quarterly PM CEMS reports. All data shall be reported in six hour rolling averages.

**Frequency of submittal of the compliance demonstration: Quarterly**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-Unit 1, FSC-BS-Unit 2

**General Reference:** 40 CFR Part 60 Subpart D

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

**B. Control of Particulate Matter Emissions**

B2 - Standards of Performance for Fossil-Fuel-Fired Steam Generators (NSPS). Standard for particulate matter (PM).

(a) Except as provided under paragraphs (b), (c), (d), and (e) of this section, On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that:

(1) Contain PM in excess of 43 nanograms per joule (ng/J) heat input (0.10 lb/MMBtu) derived from fossil fuel or fossil fuel and wood residue.

(c) "As an alternate to meeting the requirements of paragraph (a) of this section, an owner or operator that elects to install, calibrate, maintain, and operate a continuous emissions monitoring systems (CEMS) for measuring PM emissions can petition the Administrator (in writing) to comply with §60.42Da(a) of subpart Da of this part. If the Administrator grants the petition, the source will from then on (unless the unit is modified or reconstructed in the future) have to comply with the requirements in §60.42Da(a) of subpart Da of this part.

§60.48Da - Compliance provisions.

(a) For affected facilities for which construction, modification, or reconstruction commenced before May 4, 2011, the applicable PM emissions limit and opacity standard under §60.42Da, SO2 emissions limit under §60.43Da, and NOX emissions limit under §60.44Da apply at all times except during periods of startup, shutdown, or malfunction.....”

§60.42Da - Standards for particulate matter (PM).

(a) Except as provided in paragraph (f) of this section, on and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility shall not cause to be discharged into the atmosphere from any affected facility for which construction, reconstruction, or modification commenced before March 1, 2005, any gases that contain PM in excess of 13 ng/J (0.03 lb/MMBtu) heat input.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

Quarterly Monitoring Report:   x

- Annual Compliance Certification:       x
- Semi-Annual Monitoring Report:         x

Methods used to demonstrate compliance:

**Monitoring Reference: §60.49Da Describe:**

(s) The owner or operator shall prepare and submit to the Administrator for approval a unit-specific monitoring plan for each monitoring system, at least 45 days before commencing certification testing of the monitoring systems. The owner or operator shall comply with the requirements in your plan. The plan must address the requirements in paragraphs (s)(1) through (6) of this section.

- (1) Installation of the CEMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of the exhaust emissions (e.g., on or downstream of the last control device);
- (2) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems;
- 3) Performance evaluation procedures and acceptance criteria (e.g., calibrations, relative accuracy test audits (RATA), etc.);
- (4) Ongoing operation and maintenance procedures in accordance with the general requirements of §60.13(d) or part 75 of this chapter (as applicable);
- (5) Ongoing data quality assurance procedures in accordance with the general requirements of §60.13 or part 75 of this chapter (as applicable); and
- (6) Ongoing recordkeeping and reporting procedures in accordance with the requirements of this subpart.

**Testing Reference: §60.49Da Describe:**

(v) The owner or operator of an affected facility using a CEMS measuring PM emissions to meet requirements of this subpart shall install, certify, operate, and maintain the CEMS as specified in paragraphs (v)(1) through (v)(4) of this section.

- (1) The owner or operator shall conduct a performance evaluation of the CEMS according to the applicable requirements of §60.13, Performance Specification 11 in appendix B of this part, and procedure 2 in appendix F of this part.
- (2) During each PM correlation testing run of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O<sub>2</sub> (or CO<sub>2</sub>) data shall be collected concurrently (or within a 30- to 60-minute period) by both the CEMS and performance tests conducted using the following test methods.
  - (i) For PM, Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall be used; and
  - (ii) For O<sub>2</sub> (or CO<sub>2</sub>), Method 3A or 3B of appendix A-2 of this part, as applicable shall be used.
- (3) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be



performed annually, and Response Correlation Audits must be performed every 3 years.

(4) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in §60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (i.e., reference method) data and performance test (i.e., compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see [http://www.epa.gov/ttn/chief/ert/ert\\_tool.html/](http://www.epa.gov/ttn/chief/ert/ert_tool.html/)) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFire database.

**Record Keeping Reference: 40 CFR §60.07(f) Describe:**

Any owner or operator subject to the provisions of this part shall 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.

**Reporting Reference: 40 CFR §60.45 Describe:**

Excess emission and monitoring system performance (MSP) reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in §60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

(4) Particulate matter. Excess emissions for affected facilities using a CEMS for measuring PM are defined as any boiler operating day period during which the average emissions (arithmetic average of all operating one-hour periods) exceed the applicable standards in §60.42. Affected facilities using PM CEMS must follow the most current applicable compliance and monitoring provisions in §§60.48Da and 60.49Da of subpart Da of this part.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-Unit 1, FSC-BS-Unit 2

**General Reference:** Reference: CPCN - Case No 9075, Section VII Condition (21)(a)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

B. Control of Particulate Matter:

B3 - CPCN Case No. 9075

To avoid triggering the Prevention of Significant Deterioration (PSD) applicability for PM and PM10 for this Project:

- (a) Emissions from Brandon Shores Units 1 and 2 each shall not exceed the following:  
PM/PM-10: 0.015 lb/MMBtu (filterable), as determined by (1) the average of three stack tests, or (2) if continuous emission monitoring for particulate matter is used to demonstrate compliance, a 24-hour rolling average;
- Total PM/PM10: 0.034 lb/MMBtu (filterable and condensable), as determined by the average of three stack tests.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference:** CPCN Describe:

See Recording Requirement.

**Testing Reference:** COMAR 26.11.03.06C Describe:

The Permittee, in accordance with COMAR 26.11.01.04A(1), shall conduct annual testing using EPA Reference Methods of 40 CFR Part 60, Appendix A The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date.

Note: The Permittee may petition the Department to use any Method 5 QC/QA testing for the PM CEMS to satisfy the requirement of the annual compliance stack test.

**Record Keeping Reference: COMAR 26.11.06.03C Describe:**

The Permittee shall operate and maintain a PM CEMS to produce valid data whenever a Unit is operating. Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter concentrations and calculating emissions in units of lb/MMBtu on a 24 hour rolling average basis.

**Reporting Reference: CPCN Case No. 9075 Section X. Condition 31 & CPCN Case No. 9075 Section X. Condition 30, COMAR 26.11.03.06C Describe:**

Final results of each compliance stack test must be submitted to MDE-ARMA within 60 days after completion of the test. Analytical data shall be submitted to MDE-ARMA directly from the emission testing company."

The Permittee shall report to the Department all period of excess emissions in quarterly PM CEMS. All data shall be reported in 24 hour rolling averages.

The permittee shall submit a report to MDE-ARMA to be postmarked by the 30th day following the end of each calendar quarter that summarizes the monthly and consecutive rolling 12-month total emissions of PM, PM10 separately for each boiler, the material handling operations, and for total emissions of those pollutants from the Brandon Shores facility.

**Frequency of submittal of the compliance demonstration: Quarterly**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-Unit 1, FSC-BS-Unit 2

**General Reference:** COMAR 26.11.09.07

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C. Control of Sulfur Oxides From Fuel Burning Equipment.

C1 - A. Sulfur Content Limitations for Fuel. A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:

(2) In Areas III and IV:

(a) All solid fuels, 1.0 percent;

(b) Distillate fuel oils, 0.3 percent; (Note: for No. 2 fuel oil on start-up)

(c) Residual fuel oils, 1.0 percent.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

**Methods used to demonstrate compliance:**

**Monitoring Reference:** COMAR 26.11.01.11B(2), COMAR 26.11.01.11D Describe:

C. Control of Sulfur Oxides

1. The owner or operator of fuel-burning equipment burning coal, with a heat input capacity of 100 million Btu per hour or greater, shall install CEMs to measure and record sulfur dioxide, nitrogen oxide, either oxygen or carbon dioxide, and flow.

The Permittee shall perform quality control/quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix B.

**Testing Reference:** 40 CFR Part 75, Appendix A, COMAR 26.11.03.06C Describe:

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A.

**Record Keeping Reference: COMAR 26.11.01.11E(2) Describe:**

The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E.

**Reporting Reference: COMAR 26.11.01.11E Describe:**

(1) CEM System Downtime Reporting Requirements.

(a) All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the breakdown.

(b) The system breakdown report required by §E(1)(a) of this regulation shall include the reason, if known, for the breakdown and the estimated period of time that the CEM will be down. The owner or operator of the CEM shall notify the Department by telephone when an out-of-service CEM is back in operation and producing data that has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in COMAR 26.11.31, and is producing data.

(2) CEM Data Reporting Requirements.

(a) All test results shall be reported in a format approved by the Department.

(b) Certification testing shall be repeated when the Department determines that the CEM data may not meet performance specifications because of component replacement or other conditions that affect the quality of generated data.

(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:

(i) The cause, time periods, and magnitude of all emissions which exceed the applicable emission standards;

(ii) The source downtime including the time and date of the beginning and end of each downtime period and whether the source downtime was planned or unplanned;

(iii) The time periods and cause of all CEM downtime including records of any repairs, adjustments, or maintenance that may affect the ability of the CEM to meet performance specifications of emission data;

(iv) Quarterly totals of excess emissions, installation downtime, and CEM downtime during the calendar quarter;

(v) Quarterly quality assurance activities;

(vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status; and

(vii) Other information required by the Department that is determined to be necessary to evaluate the data, to ensure that compliance is achieved, or to determine the applicability of this regulation.

(d) All information required by this regulation to be reported to the Department shall be retained and made available for review by the Department for a minimum of 2 years from the time the report is submitted.

**Frequency of submittal of the compliance demonstration: Quarterly**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-Unit 1, FSC-BS-Unit 2

**General Reference:** NSPS 60.43(a)(2),(c)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C. Control of Sulfur Dioxide Emissions:

C2 - 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel- Fired Steam Generators (NSPS)

§60.43 Standard for sulfur dioxide (SO<sub>2</sub>).

(a) Except as provided under paragraph (d) of this section, on and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that contain SO<sub>2</sub> in excess of:

(1) 340 ng/J heat input (0.80 lb/MM Btu) derived from liquid fossil fuel or liquid fossil fuel and wood residue.

(2) 520 ng/J heat input (1.2 lb/MMBtu) derived from solid fossil fuel or solid fossil fuel and wood residue, except as provided in paragraph (e) of this section."

"(c) Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

**Methods used to demonstrate compliance:**

**Monitoring Reference:** 40 CFR §60.45 **Describe:**

Each owner or operator of an affected facility subject to the applicable emissions standard shall install, calibrate, maintain, and operate continuous opacity monitoring system (COMS) for measuring opacity and a CEMS for measuring SO<sub>2</sub> emissions, NO<sub>x</sub> emissions, and either oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) except as provided in paragraph (b) of this section.

**Testing Reference:** 40 CFR Part 75, Appendix A, COMAR 26.11.03.06C **Describe:**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CF Part 75, Appendix A.

**Record Keeping Reference: 40 CFR § 60.07(f) Describe:**

Any owner or operator subject to the provisions of this part shall 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.

**Reporting Reference: 40 CFR §60.45 Describe:**

(g) Excess emission and monitoring system performance reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six month period. Each excess emission and MSP report shall include the information required in §60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:"

"(2) *Sulfur dioxide*. Excess emissions for affected facilities are defined as:

- (i) For affected facilities electing not to comply with §60.43(d), any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of SO<sub>2</sub> as measured by a CEMS exceed the applicable standard in §60.43; or
- (ii) For affected facilities electing to comply with §60.43(d), any 30 operating day period during which the average emissions (arithmetic average of all one-hour periods during the 30 operating days) of SO<sub>2</sub> as measured by a CEMS exceed the applicable standard in §60.43. Facilities complying with the 30-day SO<sub>2</sub> standard shall use the most current associated SO<sub>2</sub> compliance and monitoring requirements in §§60.48Da and 60.49Da of subpart Da of this part or §§60.45b and 60.47b of subpart Db of this part, as applicable.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2**

**General Reference: COMAR 26.11.27.03C and E**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C. Control of Sulfur Dioxide Emissions:

C3 - Healthy Air Act- SO<sub>2</sub> Emission Limitations.

(1) Except as provided in §E of this regulation, annual SO<sub>2</sub> emissions from each affected electric generating unit may not exceed the number of tons in §C(2) of this regulation.

(2) Annual Tonnage Limitations.

Affected Unit	Annual SO <sub>2</sub> Tonnage Limitations Beginning
	January 1, 2013
Brandon Shores Unit 1	5,392 tons
Brandon Shores Unit 2	5,627 tons

COMAR 26.11.27.03E: (1) Compliance with the emission limitations in §§B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.

(2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§B and C of this regulation.

(3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.

**Permit Shield Request: Yes**

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: COMAR 26.11.27.05A Describe:**



Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.

**Testing Reference: 40 CFR Part 75, Appendix A, COMAR 26.11.03.06C Describe:**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A.

**Record Keeping Reference: COMAR 26.11.03.05A Describe:**

The Permittee shall maintain all records necessary to demonstrate compliance with the requirements of the Healthy Air Act, COMAR 26.11.27.

**Reporting Reference: COMAR 26.11.27.05, COMAR 26.11. 27B and C Describe:**

B. Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year."

"C. Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub> and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department."

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-Unit 1, FSC-BS-Unit 2

**General Reference:** Reference: CPCN Case No. 9075- Section V. condition (17)(b)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C. Control of Sulfur Dioxide Emissions

C4 - PSD-Best Available Control Technology (BACT) for Sulfuric Acid Mist (SAM)

Emissions of SAM shall not exceed 0.027 pounds per million Btu (3-hour average).

Compliance with this standard will be determined by the average of 3 valid stack test runs using methods approved by the Department.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

**Methods used to demonstrate compliance:**

**Monitoring Reference:** COMAR 26.11.03.06C and CPCN Case No. 9075, Section V condition (17)(c), Letter dated March 4, 2013: Results of May 2012 stack test Describe:

The Permittee shall operate the boilers in accordance the Operations and Maintenance Plan (the Plan). The Plan shall include a description of good combustion practices and methods to be employed to minimize SAM emissions and methods used to estimate emissions of SAM emissions.

In accordance with the Operations and Maintenance Plan, the Permittee shall continuously monitor estimated SAM emissions by using a data acquisition system to collect data from the SO<sub>2</sub> CEM and apply a factor of 0.003 SAM/SO<sub>2</sub> in order to calculate SAM emissions for recordkeeping and reporting purposes. The permittee may petition the Department to revise the factor based upon the results of additional compliance stack tests.

**Testing Reference:** COMAR 26.11.03.06C Describe:

The Permittee shall perform quality control/ quality assurance procedures on the SO<sub>2</sub> continuous emission monitoring system that is used in conjunction with a data acquisition system in order to continuously monitor SAM emissions.

**Record Keeping Reference: COMAR 26.11.03.06C and CPCN Case No. 9075 - Section V condition 17c. & Section X condition 29 Describe:**

The Permittee shall maintain a record of the data collected by the data acquisition system which calculates SAM emissions on a continuous basis. In addition the Permittee shall maintain all records necessary to demonstrate compliance with the Operations and Maintenance Plan, including date of occurrence and duration of any startup, shutdown and malfunctions.

**Reporting Reference: COMAR 26.11.03.06C and CPCN Case No. 9075 Section X. condition 30 Describe:**

1. "CPSG (now Raven Power Fort Smallwood Complex LLC) shall submit a report to MDE-ARMA to be postmarked by the 30th day following the end of each calendar quarter that:
  - a) Summarizes separately the date, time, and duration of each startup, shutdown, or malfunction that occurred at Brandon Shores Units 1 and 2 and associated pollution control equipment during the prior period for the purposes of complying with BACT and LAER. The report shall include total monthly and consecutive 12-month total hours of startup, shutdown, and malfunction for each unit;
  - b) Summarizes the monthly and consecutive rolling 12-month total emissions of PM, PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOCs, and SAM separately for each boiler, the material handling operations, and for total emissions of those pollutants from the Brandon Shores facility."
2. The Permittee shall report to the Department within 30 days after the end of each calendar quarter, any 3-hour block average estimated SAM emission values calculated by the DAS in accordance with the O&M Plan that were greater than 0.027 pounds per mmBtu while the unit was burning primary fuel.

**Frequency of submittal of the compliance demonstration: Quarterly**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2

General Reference: Acid Rain Provisions, Acid Rain Permit attached to permit in Appendix  
A

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C. Control of Sulfur Dioxide Emissions

C5 - Acid Rain Provisions

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station.

Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

**Methods used to demonstrate compliance:**

**Monitoring Reference: 40 CFR §75.10(a)(1) and Acid Rain Permit Describe:**

The Permittee shall install, certify, operate, and maintain a SO<sub>2</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B- Monitoring Provisions.

**Testing Reference: 40 CFR Part 75, Appendix A, COMAR 26.11.03.06C Describe:**

The Permittee shall perform quality control/ quality assurance procedure on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A.

**Record Keeping Reference: See Acid Rain Permit Describe:**

The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75.

**Reporting Reference: See Acid Rain Permit Describe:**

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The Permittee shall comply with the reporting requirements of 40 CFR Part 72 and 40 CFR Part 75.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-Unit 1, FSC-BS-Unit 2

**General Reference:** 40 CFR Part 97 Subpart CCCCC-TR

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C. Control of Sulfur Dioxide Emissions:

C6 - 40 CFR Part 97 Subpart CCCCC-TR SO<sub>2</sub> Group 1 Trading Program TR SO<sub>2</sub> Group 1 Trading Program requirements (40 CFR 97.606)

**(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.613 through 97.618.

**(b) Emissions monitoring, reporting, and recordkeeping requirements.**

(1) The owners and operators, and the designated representative, of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.630 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.631 (initial monitoring system certification and recertification procedures), 97.632 (monitoring system out-of-control periods), 97.633 (notifications concerning monitoring), 97.634 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.635 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

(2) The emissions data determined in accordance with 40 CFR 97.630 through 97.635 shall be used to calculate allocations of TR SO<sub>2</sub> Group 1 allowances under 40 CFR 97.611(a)(2) and (b) and 97.612 and to determine compliance with the TR SO<sub>2</sub> Group 1 emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.630 through 97.635 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

**(c) SO<sub>2</sub> emissions requirements.** (1) TR SO<sub>2</sub> Group 1 emissions limitation.

(i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall hold, in the source's compliance account, TR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under 40 CFR 97.624(a) in an amount not less than the tons of total SO<sub>2</sub> emissions for such control period from all TR SO<sub>2</sub> Group 1 units at the source.

(ii). If total SO<sub>2</sub> emissions during a control period in a given year from the TR SO<sub>2</sub> Group 1 units at a TR SO<sub>2</sub> Group 1 source are in excess of the TR SO<sub>2</sub> Group 1 emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A). The owners and operators of the source and each TR SO<sub>2</sub> Group 1 unit at the source shall hold the TR SO<sub>2</sub> Group 1 allowances required for deduction under 40CFR 97.624(d); and

(B). The owners and operators of the source and each TR SO<sub>2</sub> Group 1 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same

violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation 40 CFR part 97, subpart CCCCC and the Clean Air Act.

(2) TR SO<sub>2</sub> Group 1 assurance provisions.

(i). If total SO<sub>2</sub> emissions during a control period in a given year from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such SO<sub>2</sub> emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under 40 CFR 97.625(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.625(b), of multiplying—

(A). The quotient of the amount by which the common designated representative's share of such SO<sub>2</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such SO<sub>2</sub> emissions exceeds the respective common designated representative's assurance level; and

(B). The amount by which total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state for such control period exceed the state assurance level.

(ii). The owners and operators shall hold the TR SO<sub>2</sub> Group 1 allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(iii). Total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period in a given year exceed the state assurance level if such total SO<sub>2</sub> emissions exceed the sum, for such control period, of the state SO<sub>2</sub> Group 1 trading budget under 40 CFR 97.610(a) and the state's variability limit under 40 CFR 97.610(b).

(iv). It shall not be a violation of 40 CFR part 97, subpart CCCCC or of the Clean Air Act if total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total SO<sub>2</sub> emissions from the TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period exceeds the common designated representative's assurance level.

(v). To the extent the owners and operators fail to hold TR SO<sub>2</sub> Group 1 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

(A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B). Each TR SO<sub>2</sub> Group 1 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart CCCCC and the Clean Air Act.

(3) Compliance periods.

(i). A TR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015 or the deadline for meeting the

unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.

(ii). A TR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance.

(i). A TR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR SO<sub>2</sub> Group 1 allowance that was allocated for such control period or a control period in a prior year.

(ii). A TR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through

(iii) above for a control period in a given year must be a TR SO<sub>2</sub> Group 1 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each TR SO<sub>2</sub> Group 1 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart CCCCC.

(6) Limited authorization. A TR SO<sub>2</sub> Group 1 allowance is a limited authorization to emit one ton of SO<sub>2</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:

(i). Such authorization shall only be used in accordance with the TR SO<sub>2</sub> Group 1 Trading Program; and

(ii). Notwithstanding any other provision of 40 CFR part 97, subpart CCCCC, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A TR SO<sub>2</sub> Group 1 allowance does not constitute a property right.

**(d) Title V permit revision requirements.**

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR SO<sub>2</sub> Group 1 allowances in accordance with 40 CFR part 97, subpart CCCCC.

(2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.630 through 97.635, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR part 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.606(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

**(e) Additional recordkeeping and reporting requirements.**

(1) Unless otherwise provided, the owners and operators of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator. (i). The certificate of representation under 40 CFR 97.616 for the designated representative for the source and each TR SO<sub>2</sub> Group 1 unit at the source and all



documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.616 changing the designated representative.

(ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart CCCCC.

(iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR SO2 Group 1 Trading Program.

(2) The designated representative of a TR SO2 Group 1 source and each TR SO2 Group 1 unit at the source shall make all submissions required under the TR SO2 Group 1 Trading Program, except as provided in 40 CFR 97.618. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

(1) Any provision of the TR SO2 Group 1 Trading Program that applies to a TR SO2 Group 1 source or the designated representative of a TR SO2 Group 1 source shall also apply to the owners and operators of such source and of the TR SO2 Group 1 units at the source.

(2) Any provision of the TR SO2 Group 1 Trading Program that applies to a TR SO2 Group 1 unit or the designated representative of a TR SO2 Group 1 unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR SO2 Group 1 Trading Program or exemption under 40 CFR 97.605 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR SO2 Group 1 source or TR SO2 Group 1 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

**Permit Shield Request: Yes**

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR 97 Subpart CCCCC-TR Describe:**

The Permittee shall comply with the monitoring requirements found in §97.606, §97.630, §97.631, §97.632, and §97.633.  
 The Permittee operates continuous emission monitoring system (CEMS) pursuant to 40 CFR Part 75, Subpart B (for SO2 monitoring) and 40 CFR

Part 75, Subpart H (for NOX monitoring).

**Testing Reference:** None Describe:

See Monitoring Requirements

**Record Keeping Reference:** 40 CFR 97 Subpart CCCCC-TR Describe:

The Permittee shall comply with the recordkeeping requirements found in §97.606, §97.630, and §97.634.

**Reporting Reference:** 40 CFR 97 Subpart CCCCC-TR Describe:

The Permittee shall comply with the reporting requirements found in §97.606, §97.630, §97.633 and §97.634.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2**

**General Reference: SO<sub>2</sub> Consent Agreement dated December 4, 2019**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

1. Beginning January 1, 2021, at all times when Unit BS1 and/or BS2 at the Brandon Shores generating station (whether operating individually or in tandem) and Unit W3 at the H.A. Wagner generating station are simultaneously operating, the following SO<sub>2</sub> emissions limits shall apply:
  - a. Units BS1, BS2, and W3 shall not exceed a cumulative SO<sub>2</sub> emissions limit of 3,860 pounds per hour, as measured on a 30-day rolling average, including only those hours when the applicable units are operating; and
  - b. Units BS1 and BS2 (operating either individually or in tandem) shall not exceed a cumulative total of 435 hours per calendar year when the applicable units are operating at a combined SO<sub>2</sub> emissions rate greater than 2,851 pounds per hour.
2. Beginning January 1, 2021, at all times when operating, Unit BS1 and BS2 at the Brandon Shores generating station (whether operating individually or in tandem) shall not exceed a combined SO<sub>2</sub> emissions limit of 3,860 pounds per hour, as measured on a 30-day rolling average.
3. Beginning January 1, 2021, at all times when operating, Unit BS1 and BS2 at the Brandon Shores generating station (whether operating individually or in tandem) shall not exceed a combined SO<sub>2</sub> emissions limit of 9,980 pounds per hour, as measured on a rolling three-hour average.
4. Beginning January 1, 2021, at all times when Unit W3 at the H.A. Wagner generating station is not operating, Unit BS1 and BS2 at the Brandon Shores generating station (whether operating individually or in tandem) shall not exceed a combined SO<sub>2</sub> emissions limit of 5,150 pounds per hour, as measured on a 1-hour average, on more than three hours per calendar year.

**Permit Shield Request: Yes**

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- |   |                  |
|---|------------------|
| <input type="checkbox"/> Quarterly Monitoring Report:     | <u>    x    </u> |
| <input type="checkbox"/> Annual Compliance Certification: | <u>    x    </u> |
| <input type="checkbox"/> Semi-Annual Monitoring Report:   | <u>    x    </u> |

Methods used to demonstrate compliance:

**Monitoring Reference: Consent Agreement dated December 4, 2019 Describe:**

14. For the purposes of Paragraphs 1-12, which require the calculation of emissions rates, an emissions rate shall be calculated as the sum of the SO<sub>2</sub> hourly emissions (lbs) of all the applicable units during the applicable period, divided by the sum of the operating hours during

the applicable period. "Operating hour" is defined as any hour or portion of an hour that a unit combusts fossil fuel.

**Testing Reference: Consent Agreement dated December 4, 2019 Describe:**

See Reporting requirements

**Record Keeping Reference: Consent Agreement dated December 4, 2019 Describe:**

See Reporting requirements

**Reporting Reference: Consent Agreement dated December 4, 2019 Describe:**

13. Raven Power will demonstrate compliance with the limitations of Paragraphs 1 through 12 through quarterly reports utilizing calculation methodologies, continuous emissions monitoring system (CEMS) availability requirements, and a report format approved by the Department. Raven Power shall submit the proposed methodologies, CEMS availability requirements, and report format within 6 months of the effective date of this consent order for approval by the Department. Raven Power shall submit each quarterly report within 30 days of the end of the applicable quarter.

15. Raven Power shall comply with the following contingency measures, which are a required component of the nonattainment SIP revision pursuant to Section 172(c)(9) of the Clean Air Act.

16. At any time that emissions from BS1, BS2, and/or W3 at the Fort Smallwood Complex exceed one or more of the SO2 emissions limits or fuel oil operations limits identified in Paragraphs 1 through 12 of this Consent Order, Raven Power shall, within 48 hours of such exceedance, undertake a full-system audit of Units BS1, BS2, W1, W2, W3, and W4 (cumulatively) at the Fort Smallwood Complex and shall submit a telephone report on the next business day and a written report to the Department within 10 days of the exceedance. At any time that emissions from Units W1, W2, and/or W4 at the Fort Smallwood Complex exceed one or more of the SO2 emissions limits or fuel oil operations limits identified in Paragraphs 1 through 12 of this Consent Order, Raven Power shall, within 48 hours of knowledge of fuel test results, undertake a full-system audit of Units BS1, BS2, W1, W2, W3, and W4 (cumulatively) at the Fort Smallwood Complex and shall submit a telephone report on the next business day and a written report to the Department within 10 days of the exceedance. The telephone report shall be submitted pursuant to COMAR 26.11.01.07C. A written report to satisfy this requirement shall include both (1) the results of the full-system audit, and (2) a report of excess emissions prepared pursuant to COMAR 26.11.01.07D and Section 3.4 of the Operating Permit. The full-system audit shall consist of a review of the parameters routinely monitored by the continuous emissions monitoring systems and the digital data acquisition systems installed on the SO2 generating units and their control devices and programs to determine whether or not the units and their controls were operating in accordance with good engineering practices.

a. If the units or their controls were not operating in accordance with good engineering practices, then Raven Power shall implement corrective actions to ensure that the limits of this Consent Order are not exceeded.

b. If the units and controls were operating in accordance with good engineering practice, then Raven Power shall inform the Department as to the reasons for their

exceedance of one or more of their SO<sub>2</sub> emissions limits and implement corrective actions to ensure that the limits of this Consent Order are not exceeded.

c. In any case of an exceedance of an SO<sub>2</sub> emission limit or of a fuel oil operations limit, Raven Power shall document and notify the Department of the corrective actions that they have taken.

d. The audit, report of excess emissions, documentation of corrective actions taken, and associated records shall be maintained on site for five years.

17. If the Essex, Maryland monitor (AIRS ID 24-005-3001) or any other Department-approved air quality SO<sub>2</sub> monitor located within the SO<sub>2</sub> Nonattainment Area, measures a 1-hour SO<sub>2</sub> concentration exceeding 75 parts per billion (i.e. an exceedance of the 1-hour SO<sub>2</sub> NAAQS), then the Department will notify Raven Power within 5 business days both verbally and in writing. If, however, Raven Power first notifies the Department both verbally and in writing of the monitored exceedance, then the Department will not also notify Raven Power. In either case, whether it is the Department or Raven Power who first notifies the other party of the monitor's exceedance of the 75 parts per billion SO<sub>2</sub> limit, within 2 business days of that first notification, Raven Power shall notify the Department whether Units BS 1, BS2, W1, W2, W3, and W4 were running at the time of the exceedance or within 24 hours preceding the exceedance. If any of those Units were running during that timeframe, Raven Power shall analyze the meteorological data on the day the 1-hour exceedance occurred to determine the extent the Fort Smallwood SO<sub>2</sub> emissions contributed to the 1-hour exceedance. The meteorological data analysis shall include: (1) trajectories run at three different heights (one at stack height; and two more within the boundary layer) by the National Oceanic and Atmospheric Administration's Hysplit program or an equivalent program; and (2) an analysis of meteorological data including the Baltimore- Washington International Airport's meteorological data and modeled upper air data using the National Weather Service's Bufkit or an equivalent program. Raven Power shall submit its meteorological data analysis, and its findings there from, to the Department within 30 days of written notification of the exceedance of the 1-hour SO<sub>2</sub> NAAQS.

**Frequency of submittal of the compliance demonstration: Quarterly**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2**

**General Reference: NO<sub>x</sub> RACT Averaging Plan Consent Order-February 18, 2016 and  
COMAR 26.11.09.08**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D. Control of NO<sub>x</sub> Emissions

D1 - NO<sub>x</sub> RACT requirements

Table 1 – Summary of NOX RACT Averaging Plan Limits (2016)

Table 1 – Summary of NO <sub>x</sub> RACT Averaging Plan Limits (2016)		
Facility	Unit	RACT Limit lb/MMBtu
Brandon Shores	1	0.5
	2	0.5
H.A. Wagner	1	0.3
	2	0.3
	3	0.5
	4	0.3

Individual unit compliance with NOX RACT requirements will be determined daily on a 30-day rolling average basis. Annual compliance will also be demonstrated by showing that annual mass emissions from the units in the averaging plan are less than 80% of the mass emissions that would have been allowed on an individual basis.

The following methodology will be used to calculate 30-day rolling emissions and determine compliance:

(1) Calculate daily system and NOX RACT emission rates:

$$ER_{System} = \sum (ER_i * (HI_i / HI_{Total}))$$

$$ERRACT = \sum (ERRACT_{,i} * (HI_i / HI_{Total}))$$

where:

ER<sub>System</sub> = System average emission rate, lb/MMBtu

ERRACT = System average NOX RACT limit, lb/MMBtu

ER<sub>i</sub> = Daily emission rate for unit i, lb/MMBtu

ERRACT<sub>,i</sub> = Daily NOX RACT limit for unit i, lb/MMBtu

$H_{li}$  = Daily heat input for unit  $i$ , MMBtu

$HITotal$  = Daily heat for all of the units =  $\sum H_{li}$ , MMBtu

(2) After 30 days, calculate 30-day rolling emission rate for the system and the NOX RACT:

$ER_{30 \text{ Day System}} = (\sum (ER_{System})) / 30$

$ER_{30 \text{ Day RACT}} = (\sum (ER_{RACT})) / 30$

where:

$ER_{30 \text{ Day System}}$  = 30-day rolling system average emission rate, MMBtu/lb

$ER_{30 \text{ Day RACT}}$  = 30-day rolling system average emission rate, MMBtu/lb

(3) Calculate mass emissions on a daily basis:

$NOX_{30 \text{ Day System}} = ER_{30 \text{ Day System}} * HITotal / 2000$

$NOX_{RACT} = ER_{30 \text{ Day RACT}} * HITotal / 2000$

where:

$NOX_{30 \text{ Day System}}$  = NOX mass emissions based on a 30-day rolling system average emission rate, tons

$NOX_{RACT}$  = NOX mass emissions based on a 30-day rolling RACT limit, tons

(4) Determine compliance with NOX RACT:

$NOX_{System} < NOX_{RACT}$

In addition on a yearly basis Raven Power will certify that the NOX mass emissions for the six units included in the averaging plan did not exceed 80% of the emissions allowable under the NOX RACT limits.

$NOX_{Annual System} < 0.80 * NOX_{RACT Total}$

where:

$NOX_{Annual System}$  = Annual NOX mass emissions for the units in the averaging plan

$NOX_{RACT Total}$  = Allowable NOX mass emissions based on the NOX RACT limits

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference: COMAR 26.11.09.08C(3), COMAR 26.11.09.08B(2)(b), Consent Agreement dated February 18, 2016 Describe:**

All the units included in the Averaging Plan have continuous emissions monitors (CEM) for monitoring NO<sub>x</sub> emissions. These units follow the operations, maintenance, recordkeeping and reporting requirements contained in 40 CFR Part 75.

D1. NO<sub>x</sub> RACT See NO<sub>x</sub> RACT Averaging Plan- Form 3B-26.  
The Permittee shall operate, calibrate, and maintain a certified NO<sub>x</sub> CEM or an alternative NO<sub>x</sub> monitoring method approved by the Department and the EPA on each installation.

The Permittee certify CEMs in accordance with Part 75, Appendix A.

**Testing Reference: 40 CFR Part 75 Describe:**

See monitoring requirements

**Record Keeping Reference: COMAR 26.11.01.11A(2), COMAR 26.11.01.11E Describe:**

The Permittee shall maintain at each of the Generating Units records and information adequate to verify the calculations used to demonstrate compliance with the Averaging Plan's requirements, and shall make these records and information available to the Department upon request. The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E.

**Reporting Reference: COMAR 26.11.01.11E(2) and COMAR 26.11.09.08K(1), Consent Agreement dated February 18, 2016 Describe:**

Quarterly reports will be submitted within 30 days of the end of each reporting quarter summarizing compliance with the Averaging Plan.

The Permittee shall comply with the reporting requirements of COMAR 26.11.01.11E. (See Reporting Condition C1 above for the specifics of COMAR 26.11.01.11 E Record Keeping and Reporting Requirements).

The Permittee shall submit quarterly emission reports of CEM data to the Department on or before the thirtieth day of the month following the end of each calendar quarter."

**Frequency of submittal of the compliance demonstration: Quarterly**



**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-Unit 1, FSC-BS-Unit 2

**General Reference:** 40 CFR 60.44(a)(3)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D. Control of NO<sub>x</sub> Emissions:

D2 – 40 CFR Part 60 Subpart D—Standards of Performance for Fossil-Fuel Fired Steam Generators (NSPS)

NSPS Standard for nitrogen oxides (NO<sub>x</sub>)

(a) Except as provided under paragraph (e) of this section, on and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that contain NO<sub>x</sub>, expressed as NO<sub>2</sub> in excess of:

(2) 129 ng/J heat input (0.30 lb/MM Btu) derived from liquid fossil fuel, liquid fossil fuel and wood residue, or gaseous fossil fuel and wood residue,

(3) 300 ng/J heat input (0.70 lb/MMBtu) derived from solid fossil fuel or solid fossil fuel and wood residue (except lignite or a solid fossil fuel containing 25 percent, by weight, or more of coal refuse).

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** 40 CFR 60.45 **Describe:**

(a) Each owner or operator of an affected facility subject to the applicable emissions standard shall install, calibrate, maintain, and operate continuous opacity monitoring system (COMS) for measuring opacity and a CEMS for measuring SO<sub>2</sub> emissions, NO<sub>x</sub> emissions, and either oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) except as provided in paragraph (b) of this section.

**Testing Reference:** 40 CFR Part 75, Appendix A, COMAR 26.11.03.06C **Describe:**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A.

**Record Keeping Reference: 40 CFR 60.07(f) Describe:**

Any owner or operator subject to the provisions of this part shall 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.

**Reporting Reference: 40 CFR 60.45 Describe:**

Emissions and fuel monitoring.

(g) Excess emission and monitoring system performance reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six month period. Each excess emission and MSP report shall include the information required in §60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

(3) *Nitrogen oxides*. Excess emissions for affected facilities using a CEMS for measuring NO<sub>x</sub> are defined as:

- (i) For affected facilities electing not to comply with §60.44(e), any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards in §60.44; or
- (ii) For affected facilities electing to comply with §60.44(e), any 30 operating day period during which the average emissions (arithmetic average of all one-hour periods during the 30 operating days) of NO<sub>x</sub> as measured by a CEMS exceed the applicable standard in §60.44. Facilities complying with the 30-day NO<sub>x</sub> standard shall use the most current associated NO<sub>x</sub> compliance and monitoring requirements in §§60.48Da and 60.49Da of subpart Da of this part.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2**

**General Reference: COMAR 26.11.27.03B(1)-(7) and 26.11.27.03E**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D. Control of NO<sub>x</sub> Emissions

D3 - Healthy Air Act- NO<sub>x</sub> Emission Limitations.

- (1) Except as provided in §E of this regulation, annual NO<sub>x</sub> emissions from each affected electric generating unit may not exceed the number of tons in §B(2) of this regulation.
- (2) Annual Tonnage Limitations.

Affected Unit	Annual NO <sub>x</sub> Tonnage Limitations Beginning
	January 1, 2012
Brandon Shores Unit 1	2,414 tons
Brandon Shores Unit 2	2,519 tons

- (3) Except as provided in §E of this regulation, ozone season NO<sub>x</sub> emissions from each affected electric generating unit may not exceed the number of tons in §B(4) of this regulation.
- (4) Ozone Season Tonnage Limitations

Affected Unit	Ozone Season NO <sub>x</sub> Tonnage Limitations Beginning May 1, 2012
Brandon Shores Unit 1	1,124 tons
Brandon Shores Unit 2	1,195 tons

(7) Electric System Reliability During Ozone Seasons.

(a) An exceedance of the NO<sub>x</sub> limitations in §B(4) or (6) of this regulation which occurs because PJM Interconnection, LLC or a successor independent system operator, acts to invoke "Maximum Emergency Generation", "Load Reduction", "Voltage Reduction", "Curtailement of Non-essential Building Load", or "Manual Load Dump" procedures in accordance with the current PJM Manual, or a PJM alert preceding such action as to a generating unit that has temporarily shut down in order to avoid potential interruption in electric service and maintain electric system reliability is not a violation of this chapter provided that:

- (i) Within 36 hours following the action, the owner or operator of the affected electric generating unit or units notifies the Manager of the Air Quality Compliance Program of the action taken by PJM Interconnection and provides the Department with documentation of the action which is satisfactory to the Department;
- (ii) Within 48 hours after completion of the action, the owner or operator of the affected unit or units provides the Department with the estimated NO<sub>x</sub> emissions in excess of the emission limitation; and
- (iii) See State-only enforceable section of the permit for additional requirement.

(b) The owner or operator of an electric generating unit or system, as applicable, shall send written notice to the Manager of the Air Quality Compliance Program not later than 5 business days following the day when the cumulative ozone season NO<sub>x</sub> emissions of an electric generating unit or system, as applicable, are:

- (i) Equal to approximately 80 percent of the applicable ozone season emission limitation; and
- (ii) Equal to the applicable ozone season emission limitation.

**COMAR 26.11.27.03E. System-Wide Compliance Determinations.**

- E1. Compliance with the emission limitations of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.
- E2. A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations of this regulation.
- E3. If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations of this regulation applicable to that electric generating unit.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: COMAR 26.11.27.05A Describe:**

Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.

**Testing Reference: 40 CFR Part 75, Appendix A, COMAR 26.11.03.06C Describe:**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A.

**Record Keeping Reference: COMAR 26.11.01.05A Describe:**

The Permittee shall maintain all records necessary to demonstrate compliance with the requirements of the Healthy Air Act, COMAR 26.11.27.

**Reporting Reference: COMAR 26.11.27B and C Describe:**

COMAR 26.11.27.05 - Monitoring and Reporting Requirements,

B. Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year."

C. Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2

General Reference: Acid Rain Provisions, Acid Rain Permit attached to permit in Appendix  
A

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D. Control of NO<sub>x</sub> Emissions

D4- Acid Rain Provisions

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR 75.10(a)(1) and Acid Rain Permit Describe:**

The Permittee shall install, certify, operate, and maintain a NO<sub>x</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B-Monitoring Provisions.

**Testing Reference: 40 CFR Part 75, Appendix A, COMAR 26.11.03.06C Describe:**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A.

**Record Keeping Reference: See Acid Rain Permit Describe:**

The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75.

**Reporting Reference: See Acid Rain Permit Describe:**

The Permittee shall also comply with the reporting requirements of 40 CFR Part 72 and Part 75.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2**

**General Reference: 40 CFR Part 97 Subpart AAAAA-TR**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

A. 40 CFR Part 97 Subpart AAAAA-TR NOX Annual Trading Program  
TR NOX Annual Trading Program requirements (40 CFR 97.406)

**(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.413 through 97.418.

**(b) Emissions monitoring, reporting, and recordkeeping requirements.**

(1) The owners and operators, and the designated representative, of each TR NOX Annual source and each TR NOX Annual unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.430 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.431 (initial monitoring system certification and recertification procedures), 97.432 (monitoring system out-of-control periods), 97.433 (notifications concerning monitoring), 97.434 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.435 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

(2) The emissions data determined in accordance with 40 CFR 97.430 through 97.435 shall be used to calculate allocations of TR NOX Annual allowances under 40 CFR 97.411(a)(2) and (b) and 97.412 and to determine compliance with the TR NOX Annual emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.430 through 97.435 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

**(c) NOX emissions requirements.**

(1) TR NOX Annual emissions limitation.

(i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NOX Annual source and each TR NOX Annual unit at the source shall hold, in the source's compliance account, TR NOX Annual allowances available for deduction for such control period under 40 CFR 97.424(a) in an amount not less than the tons of total NOX emissions for such control period from all TR NOX Annual units at the source.

(ii). If total NOX emissions during a control period in a given year from the TR NOX Annual units at a TR NOX Annual source are in excess of the TR NOX Annual emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A). The owners and operators of the source and each TR NOX Annual unit at the source shall hold the TR NOX Annual allowances required for deduction under 40 CFR 97.424(d); and



(B). The owners and operators of the source and each TR NOX Annual unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.

(2) TR NOX Annual assurance provisions.

(i). If total NOX emissions during a control period in a given year from all TR NOX Annual units at TR NOX Annual sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NOX emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR NOX Annual allowances available for deduction for such control period under 40 CFR 97.425(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.425(b), of multiplying— (A) The quotient of the amount by which the common designated representative's share of such NOX emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NOX emissions exceeds the respective common designated representative's assurance level; and (B) The amount by which total NOX emissions from all TR NOX Annual units at TR NOX Annual sources in the state for such control period exceed the state assurance level. (ii). The owners and operators shall hold the TR NOX Annual allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(iii). Total NOX emissions from all TR NOX Annual units at TR NOX Annual sources in the State during a control period in a given year exceed the state assurance level if such total NOX emissions exceed the sum, for such control period, of the state NOX Annual trading budget under 40 CFR 97.410(a) and the state's variability limit under 40 CFR 97.410(b).

(iv). It shall not be a violation of 40 CFR part 97, subpart AAAAA or of the Clean Air Act if total NOX emissions from all TR NOX Annual units at TR NOX Annual sources in the State during a control period exceed the state assurance level or if a common designated representative's share of total NOX emissions from the TR NOX Annual units at TR NOX Annual sources in the state during a control period exceeds the common designated representative's assurance level.

(v). To the extent the owners and operators fail to hold TR NOX Annual allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

(A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B). Each TR NOX Annual allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.

(3) Compliance periods.

(i). A TR NOX Annual unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015, or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.

(ii). A TR NOX Annual unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance. (i). A TR NOX Annual allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR NOX Annual allowance that was allocated for such control period or a control period in a prior year.

(ii). A TR NOX Annual allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through

(iii) above for a control period in a given year must be a TR NOX Annual allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each TR NOX Annual allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart AAAAA.

(6) Limited authorization. A TR NOX Annual allowance is a limited authorization to emit one ton of NOX during the control period in one year. Such authorization is limited in its use and duration as follows:

(i). Such authorization shall only be used in accordance with the TR NOX Annual Trading Program; and

(ii). Notwithstanding any other provision of 40 CFR part 97, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A TR NOX Annual allowance does not constitute a property right.

**(d) Title V permit revision requirements.**

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR NOX Annual allowances in accordance with 40 CFR part 97, subpart AAAAA.

(2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.430 through 97.435, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.406(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

**(e) Additional recordkeeping and reporting requirements.**

(1) Unless otherwise provided, the owners and operators of each TR NOX Annual source and each TR NOX Annual unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i). The certificate of representation under 40 CFR 97.416 for the designated representative for the source and each TR NOX Annual unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents

shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.416 changing the designated representative.

(ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart AAAAA.

(iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR NOX Annual Trading Program.

(2) The designated representative of a TR NOX Annual source and each TR NOX Annual unit at the source shall make all submissions required under the TR NOX Annual Trading Program, except as provided in 40 CFR 97.418. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

(1) Any provision of the TR NOX Annual Trading Program that applies to a TR NOX Annual source or the designated representative of a TR NOX Annual source shall also apply to the owners and operators of such source and of the TR NOX Annual units at the source.

(2) Any provision of the TR NOX Annual Trading Program that applies to a TR NOX Annual unit or the designated representative of a TR NOX Annual unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR NOX Annual Trading Program or exemption under 40 CFR 97.405 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR NOX Annual source or TR NOX Annual unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:              x
- Annual Compliance Certification:          x
- Semi-Annual Monitoring Report:          x

Methods used to demonstrate compliance:

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**Monitoring Reference: 40 CFR Part 97 Subpart AAAAA -TR Describe:**

The Permittee shall comply with the monitoring requirements found in §97.406, §97.430, and §97.434 for the NOX Annual Trading Program

**Testing Reference: 40 CFR Part 97 Subpart AAAAA-TR Describe:**

See Monitoring Requirements

**Record Keeping Reference: 40 CFR Part 97 Subpart AAAAA-TR Describe:**

The Permittee shall comply with the recordkeeping requirements found in §97.406, §97.430, and §97.434 for the NOX Annual Trading Program.

**Reporting Reference: 40 CFR Part 97 Subpart AAAAA-TR Describe:**

The Permittee shall comply with the reporting requirements found in §97.406, §97.430, §97.433 and §97.434 for the NOX Annual Trading Program.

**Frequency of submittal of the compliance demonstration: Quarterly**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2**  
**General Reference: 40 CFR Part 97 Subpart BBBB-TR**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

TR NOX Ozone Season Trading Program Requirements (40 CFR 97.506)

**(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.513 through 97.518.

**(b) Emissions monitoring, reporting, and recordkeeping requirements.**

(1) The owners and operators, and the designated representative, of each TR NOX Ozone Season source and each TR NOX Ozone Season unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.530 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.531 (initial monitoring system certification and recertification procedures), 97.532 (monitoring system out-of-control periods), 97.533 (notifications concerning monitoring), 97.534 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.535 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

(2) The emissions data determined in accordance with 40 CFR 97.530 through 97.535 shall be used to calculate allocations of TR NOX Ozone Season allowances under 40 CFR 97.511(a)(2) and (b) and 97.512 and to determine compliance with the TR NOX Ozone Season emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.530 through 97.535 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

**(c) NOX emissions requirements.**

(1) TR NOX Ozone Season emissions limitation.

(i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NOX Ozone Season source and each TR NOX Ozone Season unit at the source shall hold, in the source's compliance account, TR NOX Ozone Season allowances available for deduction for such control period under 40 CFR 97.524(a) in an amount not less than the tons of total NOX emissions for such control period from all TR NOX Ozone Season units at the source.

(ii). If total NOX emissions during a control period in a given year from the TR NOX Ozone Season units at a TR NOX Ozone Season source are in excess of the TR NOX Ozone Season emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A). The owners and operators of the source and each TR NOX Ozone Season unit at the source shall hold the TR NOX Ozone Season allowances required for deduction under 40 CFR 97.524(d); and

(B). The owners and operators of the source and each TR NOX Ozone Season unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart BBBBB and the Clean Air Act.

(2) TR NOX Ozone Season assurance provisions.

(i). If total NOX emissions during a control period in a given year from all TR NOX Ozone Season units at TR NOX Ozone Season sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NOX emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR NOX Ozone Season allowances available for deduction for such control period under 40 CFR 97.525(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator (A). The quotient of the amount by which the common designated representative's share of such NOX emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NOX emissions exceeds the respective common designated representative's assurance level; and

(B). The amount by which total NOX emissions from all TR NOX Ozone Season units at TR NOX Ozone Season sources in the state for such control period exceed the state assurance level.

(ii). The owners and operators shall hold the TR NOX Ozone Season allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(iii). Total NOX emissions from all TR NOX Ozone Season units at TR NOX Ozone Season sources in the state during a control period in a given year exceed the state assurance level if such total NOX emissions exceed the sum, for such control period, of the State NOX Ozone Season trading budget under 40 CFR 97.510(a) and the state's variability limit under 40 CFR 97.510(b).

(iv). It shall not be a violation of 40 CFR part 97, subpart BBBBB or of the Clean Air Act if total NOX emissions from all TR NOX Ozone Season units at TR NOX Ozone Season sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total NOX emissions from the TR NOX Ozone Season units at TR NOX Ozone Season sources in the state during a control period exceeds the common designated representative's assurance level.

(v). To the extent the owners and operators fail to hold TR NOX Ozone Season allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

(A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and (B). Each TR NOX Ozone Season allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart BBBBB and the Clean Air Act.

(3) Compliance periods.

(i). A TR NOX Ozone Season unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of May 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.530(b) and for each control period thereafter.

(ii). A TR NOX Ozone Season unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.530(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance.

(i). A TR NOX Ozone Season allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR NOX Ozone Season allowance that was allocated for such control period or a control period in a prior year.

(ii). A TR NOX Ozone Season allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a TR NOX Ozone Season allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each TR NOX Ozone Season allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart BBBBB.

(6) Limited authorization. A TR NOX Ozone Season allowance is a limited authorization to emit one ton of NOX during the control period in one year. Such authorization is limited in its use and duration as follows:

(i). Such authorization shall only be used in accordance with the TR NOX Ozone Season Trading Program; and

(ii). Notwithstanding any other provision of 40 CFR part 97, subpart BBBBB, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A TR NOX Ozone Season allowance does not constitute a property right.

**(d) Title V permit revision requirements.**

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR NOX Ozone Season allowances in accordance with 40 CFR part 97, subpart BBBBB.

(2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.530 through 97.535, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.506(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

**(e) Additional recordkeeping and reporting requirements.**

(1) Unless otherwise provided, the owners and operators of each TR NOX Ozone Season source and each TR NOX Ozone Season unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

- (i). The certificate of representation under 40 CFR 97.516 for the designated representative for the source and each TR NOX Ozone Season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.516 changing the designated representative.
- (ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart BBBBB.
- (iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR NOX Ozone Season Trading Program.

(2) The designated representative of a TR NOX Ozone Season source and each TR NOX Ozone Season unit at the source shall make all submissions required under the TR NOX Ozone Season Trading Program, except as provided in 40 CFR 97.518. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

(1) Any provision of the TR NOX Ozone Season Trading Program that applies to a TR NOX Ozone Season source or the designated representative of a TR NOX Ozone Season source shall also apply to the owners and operators of such source and of the TR NOX Ozone Season units at the source.

(2) Any provision of the TR NOX Ozone Season Trading Program that applies to a TR NOX Ozone Season unit or the designated representative of a TR NOX Ozone Season unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR NOX Ozone Season Trading Program or exemption under 40 CFR 97.505 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR NOX Ozone Season source or TR NOX Ozone Season unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR Part 97 Subpart BBBBB-TR Describe:**

The Permittee shall comply with the monitoring requirements found in §97.506, §97.530, and §97.534 for the NOX Ozone Season Trading Program.



**Testing Reference: 40 CFR Part 97 Subpart BBBBB-TR Describe:**

See Monitoring Requirements

**Record Keeping Reference: 40 CFR Part 97 Subpart BBBBB-TR Describe:**

The Permittee shall comply with the recordkeeping requirements found in §97.506, §97.530, and §97.534 for the NOX Ozone Season Trading Program.

**Reporting Reference: 40 CFR Part 97 Subpart BBBBB-TR Describe:**

The Permittee shall comply with the reporting requirements found in §97.506, §97.530, §97.533, and §97.534 for the NOX Ozone Season Trading Program.

**Frequency of submittal of the compliance demonstration: Quarterly**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-Unit 1, FSC-BS-Unit 2

**General Reference:** CPCN Case No. 9075, Section V Condition 17a

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

PSD-Best Available Control Technology (BACT) for Carbon Monoxide (CO). Emissions of CO shall not exceed 0.2 pounds per million Btu (lb/MMBtu) (3-hour average). This limit shall be achieved by the application of good combustion practices. Compliance with this standard will be determined by the average of 3 valid stack test runs using methods approved by the Department.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference:** COMAR 26.11.03.06C and CPCN Case No. 9075 - June 4, 2007, Section V Condition (17)(c) Describe:

The Permittee shall operate the boilers in accordance the Operations and Maintenance Plan (the Plan). The Plan shall include a description of good combustion practices and methods to be employed to minimize CO emissions and methods used to estimate emissions of CO.

In accordance with the Operations and Maintenance Plan, the Permittee shall continuously monitor CO emissions using a continuous emissions monitor. The Permittee shall perform QC/QA procedures on the CEM system in accordance with facility specific practices and/or those recommended by the CEM manufacturer.

**Testing Reference:** CPCN Case No. 9075 - Section VIII, Conditions 22, 23, and 24 Describe:

The Permittee shall perform quality control/ quality assurance procedures on the CO continuous emission monitoring system.

**Record Keeping Reference:** COMAR 26.11.03.06C and CPCN Case No. 9075, Section V Condition 17. & Section X Condition 29 Describe:

The Permittee shall maintain a record of the CO CEM readings collected by the data acquisition system. The Permittee shall maintain all records necessary to demonstrate compliance with the Operations and Maintenance Plan, including date of occurrence and duration of any startup, shutdown and malfunctions.

**Reporting Reference: CPCN Case No. 9075, Section X. Conditions 30 and 35, COMAR 26.11.01.04A, COMAR 26.11.03.06C Describe:**

1. The permittee shall submit a report to MDE-ARMA to be postmarked by the 30th day following the end of each calendar quarter that
  - a) Summarizes separately the date, time, and duration of each startup, shutdown, or malfunction that occurred at Brandon Shores Units 1 and 2 and associated pollution control equipment during the prior period for the purposes of complying with BACT and LAER. The report shall include total monthly and consecutive 12- month total hours of startup, shutdown, and malfunction for each unit;
  - b) Summarizes the monthly and consecutive rolling 12-month total emissions of PM, PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOCs, and SAM separately for each boiler, the material handling operations, and for total emissions of those pollutants from the Brandon Shores facility.
2. If additional tests are requested, the Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to test and a notice of intent to test at least 10 days prior to the scheduled test date. The Permittee shall submit the results of stack tests in a final report within 60 days from test completion. Analytical data shall be submitted to MDE-ARMA directly from the emission testing company.
3. All air quality notifications and reports required by this CPCN shall be submitted to:  
Administrator, Compliance Program  
Air and Radiation Management Administration  
1800 Washington Boulevard  
Baltimore, Maryland 21230
4. The Permittee shall provide to the Department within 30 days after the end of each calendar quarter, any 3-hour block average estimated CO emission values calculated by the DAS in accordance with the O&M Plan that were greater than 0.2 pounds per mmBtu while the unit was burning primary fuel.

**Frequency of submittal of the compliance demonstration: Quarterly**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-Unit 1, FSC-BS-Unit 2

**General Reference:** CPCN Case No. 9075, Section VI Condition 19a

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

F. Control of VOC Emissions: Lowest Achievable Emission Rate (LAER) for Volatile Organic Compound (VOC)

Emissions of VOC shall not exceed 0.0024 lb/MMBtu per unit (3-hour average). Compliance with this standard will be determined by the average of 3 valid stack test runs using methods approved by the Department.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:   x
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** COMAR 26.11.03.06C and CPCN Case No. 9075 - Section VI Condition (19)(b) Describe:

The Permittee shall operate the boilers in accordance the Operations and Maintenance Plan (the Plan). The Plan shall include a description of good combustion practices and methods to be employed to minimize VOC emissions and methods used to estimate VOC emissions during startup, shutdown, and malfunction of the generating units or associated pollution control systems.

In accordance with the Operations and Maintenance Plan, the Permittee shall continuously monitor estimated VOC emissions by using a data acquisition system to collect data from the CO CEM and apply a factor of 0.012 VOC/CO in order to calculate VOC emissions for recordkeeping and reporting purposes. The permittee may petition the Department to revise the factor based upon the results of additional compliance stack tests.

**Testing Reference:** CPCN Case No. 9075 - Section VIII, Conditions 22, 23, and 24 Describe:

The Permittee shall perform quality control/ quality assurance procedures on the CO continuous emission monitoring system that is used in conjunction with a data acquisition system in order to continuously monitor VOC emissions.

**Record Keeping Reference: COMAR 26.11.03.06C and CPCN Case No. 9075, Section VI Condition 19. & Section X Condition 29 Describe:**

The Permittee shall maintain a record of the data collected by the data acquisition system which calculates VOC emissions on a continuous basis. The Permittee shall maintain all records necessary to demonstrate compliance with the Operations and Maintenance Plan, including date of occurrence and duration of any startup, shutdown and malfunctions in the operation of Brandon Shores Units 1 and 2 and associated emissions control equipment.

**Reporting Reference: COMAR 26.1.03.06C, CPCN Case No. 9075, Section X. Condition 30, COMAR26.11.03.06C Describe:**

The Permittee shall report to the Department within 30 days after the end of each calendar quarter, any 3-hour block average estimated VOC emission values calculated by the DAS in accordance with the O&M Plan that were greater than 0.0024 pounds per MMBtu while the unit was burning primary fuel.

**Frequency of submittal of the compliance demonstration: Quarterly**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2

General Reference: 40 CFR 63 Part 63, Subpart UUUUU, Table 2, Table 4

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

Filterable PM - 0.03 lb/MMBtu

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR 63.10021(b) Describe:**

Demonstrating compliance using PM CEMS.

b) Except as otherwise provided in §63.10020(c), if you use a CEMS to measure SO<sub>2</sub>, PM, HCl, HF, or Hg emissions, or using a sorbent trap monitoring system to measure Hg emissions, you must demonstrate continuous compliance by using all quality-assured hourly data recorded by the CEMS (or sorbent trap monitoring system) and the other required monitoring systems (e.g., flow rate, CO<sub>2</sub>, O<sub>2</sub>, or moisture systems) to calculate the arithmetic average emissions rate in units of the standard on a continuous 30-boiler operating day (or, if alternate emissions averaging is used for Hg, 90-boiler operating day) rolling average basis, updated at the end of each new boiler operating day. Use Equation 8 to determine the 30- (or, if applicable, 90-) boiler operating day rolling average.

**Testing Reference: 40 CFR 63 Subpart UUUUU Table 5 Describe:**

Section 1, PM CEMS using Appendix B of 40 CFR 63 Subpart UUUUU.

**Record Keeping Reference: 40 CFR 63 Subpart UUUUU Table 7 Describe:**

Section 1, CEMS to measure PM. Compliance is demonstrated by calculating the 30- (or 90-)

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boiler operating day rolling arithmetic average emissions rate in units of the applicable emissions standard basis at the end of each boiler operating day using all of the quality assured hourly average CEMS or sorbent trap data for the previous 30- (or 90-) boiler operating days, excluding data recorded during periods of startup or shutdown.

**Reporting Reference: 40 CFR 63.10031, 40 CFR 63 Subpart UUUUU Table 8 Describe:**

Compliance reports must contain the information required in § 63.10031(c)(1) through (9); and section B. and C. from Table 8.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2

General Reference: 40 CFR 63 Part 63, Subpart UUUUU, Table 2

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

SO<sub>2</sub> - 0.20 lb/MMBtu (surrogate for acid gas HAP)

OR

HCl - 0.002 lb/MMBtu

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR 63.10021(d) Describe:**

Demonstrating compliance using quarterly HCl performance testing.

(d) If you use quarterly performance testing to demonstrate compliance with one or more applicable emissions limits in Table 1 or 2 to this subpart, you

(1) May skip performance testing in those quarters during which less than 168 boiler operating hours occur, except that a performance test must be conducted at least once every calendar year.

(2) Must conduct the performance test as defined in Table 5 to this subpart and calculate the results of the testing in units of the applicable emissions standard; and

(3) Must conduct site-specific monitoring using CMS to demonstrate compliance with the site-specific monitoring requirements in Table 7 to this subpart pertaining to HCl and HF emissions from a liquid oil-fired EGU to ensure compliance with the HCl and HF emission limits in Tables 1 and 2 to this subpart, in accordance with the requirements of §63.10000(c)(2)(iii). The monitoring must meet the general operating requirements provided in §63.10020.



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**Testing Reference: 40 CFR 63 Subpart UUUUU Table 5 Describe:**

Section 3, HCl quarterly emission testing as described in Table 5.

**Record Keeping Reference: 40 CFR 63 Subpart UUUUU Table 7 Describe:**

Section 4, Quarterly performance testing for coal-fired EGUs to measure compliance with HCl applicable emissions limit in Table 2. Compliance is demonstrated by Calculating the results of the testing in units of the applicable emissions standard.

**Reporting Reference: 40 CFR 63.10031, 40 CFR 63 Subpart UUUUU Table 8 Describe:**

Compliance reports must contain the information required in § 63.10031(c)(1) through (9); and section B. and C. from Table 8.

**Frequency of submittal of the compliance demonstration: Quarterly**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2

General Reference: 40 CFR 63 Part 63, Subpart UUUUU, Table 2

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

Hg - 1.2 lb/Tbtu

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR 63.10021(b) Describe:**

Demonstrating compliance using Hg CEMS.

b) Except as otherwise provided in §63.10020(c), if you use a CEMS to measure SO<sub>2</sub>, PM, HCl, HF, or Hg emissions, or using a sorbent trap monitoring system to measure Hg emissions, you must demonstrate continuous compliance by using all quality-assured hourly data recorded by the CEMS (or sorbent trap monitoring system) and the other required monitoring systems (e.g., flow rate, CO<sub>2</sub>, O<sub>2</sub>, or moisture systems) to calculate the arithmetic average emissions rate in units of the standard on a continuous 30-boiler operating day (or, if alternate emissions averaging is used for Hg, 90-boiler operating day) rolling average basis, updated at the end of each new boiler operating day. Use Equation 8 to determine the 30- (or, if applicable, 90-) boiler operating day rolling average.

**Testing Reference: 40 CFR 63.10010(a), (b), (c), and (d) and 40 CFR 63 Subpart UUUUU Table 5**

**Describe:**

Section 4, Hg CEMS using Appendix A of 40 CFR 63 Subpart UUUUU.

**Record Keeping Reference: 40 CFR 63 Subpart UUUUU Table 7 Describe:**

Section 1, CEMS to measure Hg. Compliance is demonstrated by calculating the 30- (or 90-)

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boiler operating day rolling arithmetic average emissions rate in units of the applicable emissions standard basis at the end of each boiler operating day using all of the quality assured hourly average CEMS or sorbent trap data for the previous 30- (or 90-) boiler operating days, excluding data recorded during periods of startup or shutdown.

**Reporting Reference: 40 CFR 63.10031, 40 CFR 63 Subpart UUUUU Table 8 Describe:**

Compliance reports must contain the information required in § 63.10031(c)(1) through (9); and section B. and C. from Table 8.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2

General Reference: 40 CFR Part 63, Subpart UUUUU Table 3

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

Conduct a tune-up of the EGU burner and combustion controls at least each 36 calendar months, or each 48 calendar months if neural network combustion optimization software is employed, as specified in § 63.10021(e).

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** None Describe:

**Testing Reference:** 40 CFR 63.10021(e)(1)-(7) Describe:

If you must conduct periodic performance tune-ups of your EGU(s), as specified in paragraphs (e)(1) through (9) of this section, perform the first tune-up as part of your initial compliance demonstration. Notwithstanding this requirement, you may delay the first burner inspection until the next scheduled unit outage provided you meet the requirements of § 63.10005. Subsequently, you must perform an inspection of the burner at least once every 36 calendar months unless your EGU employs neural network combustion optimization during normal operations in which case you must perform an inspection of the burner and combustion controls at least once every 48 calendar months.

40 CFR 63.10021(e)(1)

As applicable, inspect the burner and combustion controls, and clean or replace any components of the burner or combustion controls as necessary upon initiation of the work practice program and at least once every required inspection period. Repair of a burner or combustion control component requiring special order parts may be scheduled as follows:

40 CFR 63.10021(e)(1)(i)

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Burner or combustion control component parts needing replacement that affect the ability to optimize NO<sub>x</sub> and CO must be installed within 3 calendar months after the burner inspection,

40 CFR 63.10021(e)(1)(ii)

Burner or combustion control component parts that do not affect the ability to optimize NO<sub>x</sub> and CO may be installed on a schedule determined by the operator;

40 CFR 63.10021(e)(2)

As applicable, inspect the flame pattern and make any adjustments to the burner or combustion controls necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available, or in accordance with best combustion engineering practice for that burner type;

40 CFR 63.10021(e)(3)

As applicable, observe the damper operations as a function of mill and/or cyclone loadings, cyclone and pulverizer coal feeder loadings, or other pulverizer and coal mill performance parameters, making adjustments and effecting repair to dampers, controls, mills, pulverizers, cyclones, and sensors;

40 CFR 63.10021(e)(4)

As applicable, evaluate windbox pressures and air proportions, making adjustments and effecting repair to dampers, actuators, controls, and sensors;

40 CFR 63.10021(e)(5)

Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly. Such inspection may include calibrating excess O<sub>2</sub> probes and/or sensors, adjusting overfire air systems, changing software parameters, and calibrating associated actuators and dampers to ensure that the systems are operated as designed. Any component out of calibration, in or near failure, or in a state that is likely to negate combustion optimization efforts prior to the next tune-up, should be corrected or repaired as necessary;

40 CFR 63.10021(e)(6)

Optimize combustion to minimize generation of CO and NO<sub>x</sub>. This optimization should be consistent with the manufacturer's specifications, if available, or best combustion engineering practice for the applicable burner type. NO<sub>x</sub> optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, adjusting combustion zone temperature profiles, and add-on controls such as SCR and SNCR; CO optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, and adjusting combustion zone temperature profiles;

40 CFR 63.10021(e)(7)

While operating at full load or the predominantly operated load, measure the concentration in the effluent stream of CO and NO<sub>x</sub> in ppm, by volume, and oxygen in volume percent,

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before and after the tune-up adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). You may use portable CO, NO<sub>x</sub> and O<sub>2</sub> monitors for this measurement. EGU's employing neural network optimization systems need only provide a single pre- and post-tune-up value rather than continual values before and after each optimization adjustment made by the system;

**Record Keeping Reference: 40 CFR 63.10021(e)(8), 40 CFR 63.10009(j), 40 CFR 63.10032, 40 CFR 63.10033 Describe:**

Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (e)(1) through (e)(9) of this section including:

40 CFR 63.10021(e)(8)(i)

The concentrations of CO and NO<sub>x</sub> in the effluent stream in ppm by volume, and oxygen in volume percent, measured before and after an adjustment of the EGU combustion systems;

40 CFR 63.10021(e)(8)(ii)

A description of any corrective actions taken as a part of the combustion adjustment; and

40 CFR 63.10021(e)(8)(iii)

The type(s) and amount(s) of fuel used over the 12 calendar months prior to an adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period

Compliance will also be demonstrated by meeting all applicable record keeping requirements under 40 CFR 63.10032 and 40 CFR 63.10033.

**Reporting Reference: 40 CFR 63.10021(e)(9), 40 CFR 63.10030, 40 CFR 63.10031 Describe:**

Report the dates of the initial and subsequent tune-ups as follows:

40 CFR 63.10021(e)(9)(i)

If the first required tune-up is performed as part of the initial compliance demonstration, report the date of the tune-up in hard copy (as specified in § 63.10030) and electronically (as specified in § 63.10031). Report the date of each subsequent tune-up electronically (as specified in § 63.10031).

40 CFR 63.10021(e)(9)(ii)

If the first tune-up is not conducted as part of the initial compliance demonstration, but is postponed until the next unit outage, report the date of that tune-up and all subsequent tune-ups electronically, in accordance with § 63.10031.

Compliance will be demonstrated by meeting all applicable reporting requirements under 40 CFR 63.10030 and 40 CFR 63.10031.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2

General Reference: 40 CFR Part 63, Subpart UUUUU Table 3

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

Talen Energy Ft. Smallwood chooses to comply using paragraph (1) of the definition of startup in § 63.10042, meaning the facility must operate all CMS during startup. Startup means either the first-ever firing of fuel in a boiler for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on site use). For startup of a unit, you must use clean fuels, either natural gas or distillate oil or a combination of clean fuels for ignition. Once you convert to firing coal, residual oil, or solid oil-derived fuel, you must engage all of the applicable control technologies except dry scrubber and SCR. You must start your dry scrubber and SCR systems, if present, appropriately to comply with relevant standards applicable during normal operation. You must comply with all applicable emissions limits at all times except for periods that meet the definitions of startup and shutdown in this subpart. You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in § 63.10011(g) and § 63.10021(h) and (i).

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** None Describe:

**Testing Reference:** None Describe:

**Record Keeping Reference:** 40 CFR 63.10032, 40 CFR 63.10033 Describe:

Compliance will be demonstrated by meeting all applicable record keeping requirements under 40 CFR 63.10032 and 40 CFR 63.0033.

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**Reporting Reference: 40 CFR 63.10030, 40 CFR 63.10031 Describe:**

Compliance will be demonstrated by meeting all applicable reporting requirements under 40 CFR 63.10030 and 40 CFR 63.10031.

**Frequency of submittal of the compliance demonstration: Semi-Annual**



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2

General Reference: 40 CFR 63.10009

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

All applicable requirements under 40 CFR 63.10009 will generally apply to the emission units, should Talen Energy choose to utilize emissions averaging to meet the limitations, standards and operating limits of 40 CFR Part 63, Subpart UUUUU.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR 63.10022 Describe:**

40 CFR 63.10022(a)

Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of paragraphs (a)(1) through (3) of this section.

40 CFR 63.10022(a)(1)

For each 30- (or 90-) day rolling average period, demonstrate compliance with the average weighted emissions limit for the existing units participating in the emissions averaging option as determined in § 63.10009(f) and (g);

40 CFR 63.10022(a)(2)

For each existing unit participating in the emissions averaging option that is equipped with PM CPMS, maintain the average parameter value at or below the operating limit established during the most recent performance test;

40 CFR 63.10022(a)(3)

For each existing unit participating in the emissions averaging option venting to a common stack configuration containing affected units from other subcategories,

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maintain the appropriate operating limit for each unit as specified in Table 4 to this subpart that applies.

### 40 CFR 63.10022(b)

Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (3) of this section is a deviation.

### **Testing Reference: 40 CFR 63.10006(g) Describe:**

If you elect to demonstrate compliance using emissions averaging under § 63.10009, you must continue to conduct performance stack tests at the appropriate frequency given in section (c) through (f) of this section.

### **Record Keeping Reference: 40 CFR 63.10009(j), 40 CFR 63.10032, 40 CFR 63.10033 Describe:**

You must develop an implementation plan for emissions averaging according to the following procedures and requirements in paragraphs (j)(1) and (2) of this section.

#### 40 CFR 63.10009(j)(1)

You must include the information contained in paragraphs (j)(1)(i) through (v) of this section in your implementation plan for all the emissions units included in an emissions averaging:

#### 40 CFR 63.10009(j)(1)(i)

The identification of all existing EGUs in the emissions averaging group, including for each either the applicable HAP emission level or the control technology installed as of 180 days after February 16, 2015, or the date on which you complete the emissions measurements used to support your emissions averaging plan (if the Administrator does not require submission and approval of your emissions averaging plan), or the date that you begin emissions averaging, whichever is earlier; and the date on which you are requesting emissions averaging to commence;

#### 40 CFR 63.10009(j)(1)(ii)

The process weighting parameter (heat input, gross electrical output, or steam generated) that will be monitored for each averaging group;

#### 40 CFR 63.10009(j)(1)(iii)

The specific control technology or pollution prevention measure to be used for each emission EGU in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple EGUs, you must identify each EGU;

#### 40 CFR 63.10009(j)(1)(iv)

The means of measurement (*e.g.*, CEMS, sorbent trap monitoring, manual performance test) of filterable PM, SO<sub>2</sub>, HF, HCl, individual or total non-Hg HAP metals, or Hg emissions in accordance with the requirements in § 63.10007 and to be used in the emissions averaging calculations; and

#### 40 CFR 63.10009(j)(1)(v)

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A demonstration that emissions averaging can produce compliance with each of the applicable emission limit(s) in accordance with paragraph (b)(1) of this section.

40 CFR 63.10009(j)(2)

If the Administrator requests you to submit the plan for review and approval, you must submit a complete implementation plan at least 120 days before April 16, 2015. If the Administrator requests you to submit the plan for review and approval, you must receive approval before initiating emissions averaging.

40 CFR 63.10009(j)(2)(i)

The Administrator shall use following criteria in reviewing and approving or disapproving the plan:

40 CFR 63.10009(j)(2)(i)(A)

Whether the content of the plan includes all of the information specified in paragraph (j)(1) of this section; and

40 CFR 63.10009(j)(2)(i)(B)

Whether the plan presents information sufficient to determine that compliance will be achieved and maintained.

40 CFR 63.10009(j)(2)(ii)

The Administrator shall not approve an emissions averaging implementation plan containing any of the following provisions:

40 CFR 63.10009(j)(2)(ii)(A)

Any averaging between emissions of different pollutants or between units located at different facilities; or

40 CFR 63.10009(j)(2)(ii)(B)

The inclusion of any emissions unit other than an existing unit in the same subcategory.

Compliance will also be demonstrated by meeting all applicable record keeping requirements under 40 CFR 63.10032 and 40 CFR 63.10033.

**Reporting Reference: 40 CFR 63.10031 Describe:** Compliance will be demonstrated by meeting all applicable reporting requirements under 40 CFR 63.10031.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No. FSC-BS-AuxBlr 1 and FSC-BS-AuxBlr 2

General Reference: COMAR 26.11.09.05A(2),(3)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

**A. Control of Visible Emissions**

Fuel Burning Equipment "In Areas III, and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity."

Exceptions. "Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, start-up, or adjustments occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

**Methods used to demonstrate compliance:**

**Monitoring Reference:** COMAR 26.11.03.06C **Describe:**

The Permittee shall verify that there are no visible emissions when burning No. 2 fuel oil. An observer shall perform an EPA Reference Method 9 observation of stack emissions for 18-minute period once every 168 block hours of operation on oil or at a minimum once per year. This requirement is waived if the total hours of operation of a boiler are less than a 100 hours in any calendar year.

The Permittee shall perform the following, if emissions are visible to human observer:

- (a) inspect combustion control system and combustion turbine operations,
- (b) perform all necessary adjustments and/or repairs to the boilers within 48 hours of operation so that visible emissions are eliminated; and
- (c) document in writing the results of inspections, adjustments and/or repairs to the boiler.

The Permittee shall after 48 hours of operation, if the required adjustments and/or repairs had not eliminated the visible emissions, perform another Method 9 observation once daily when the boiler is operating on No.2 fuel oil for 18 minutes until corrective action have eliminated visible emissions.

**Testing Reference: None Describe:**

See Monitoring Requirements

**Record Keeping Reference: COMAR 26.11.03.06C(5)(g) Describe:**

The Permittee shall maintain records of the results of visual emissions observations for a period of at least 5 years.

**Reporting Reference: COMAR 26.11.03.06C Describe:**

The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations."

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No. FSC-BS-AuxBlr 1 and FSC-BS-AuxBlr 2

General Reference: COMAR 26.11.09.07A(2)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

B. Control of Sulfur Dioxide Emissions

Control of Sulfur Oxides from fuel burning equipment. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV:

(b) Distillate fuel oil, 0.3 percent;

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** COMAR 26.11.03.06C Describe:

B. Control of Sulfur Dioxide Emissions.

The Permittee shall obtain fuel supplier certifications which verify that the fuel oil is in compliance with the sulfur content in the fuel limitation or obtain sulfur in fuel analyses of oil that is representative of the oil burned.

**Testing Reference:** None Describe:

See Monitoring Requirements.

**Record Keeping Reference:** COMAR 26.11.09.07C Describe:

B. Control of Sulfur Dioxide Emissions

The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with the sulfur content in the fuel limitation or the sulfur in fuel analyses must be maintained for at least 5 years.

**Reporting Reference: COMAR 26.11.09.07C Describe:**

B. Control of Sulfur Dioxide Emissions

The Permittee shall submit fuel certification report or fuel analyses if requested by the Department.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No. FSC-BS-AuxBlr 1 and FSC-BS-AuxBlr 2

General Reference: COMAR 26.11.09.08(G)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C. Control of Nitrogen Oxides Emissions

Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 percent or less and Combustion Turbines with a Capacity Factor Greater than 15 percent. "A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

- (a) Provide certification of the capacity factor of the equipment to the Department in writing;
- (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
- (c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;
- (d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
- (e) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request."

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: COMAR 26.11.03.06C Describe:**

The Permittee shall calculate the capacity factor of the auxiliary boilers for each calendar year within 30 days after the end of each year.

**Testing Reference: COMAR 26.11.09.08G(1)(b) Describe:**

The Permittee shall perform a combustion analysis and optimize combustion at least once annually for any of the auxiliary boiler that operates more than 500 hours during a calendar year.



**Record Keeping Reference: COMAR 26.11.03.06C, COMAR 26.11.02.19.C(1)(b), COMAR 26.11.09.08G(1)(c), and COMAR 26.11.09.08G(1)(e) Describe:**

The Permittee shall maintain the following on site and make available to the Department upon request:

- (1) Records of the calculated capacity factors.
- (2) Records of hour of operation.
- (3) Records of combustion analysis performed if the hours of operation exceed 500.
- (4) Record of training program attendance for each operator.

**Reporting Reference: COMAR 26.11.09.08G(1)(a), COMAR 26.11.03.06C, and COMAR 26.11.09.08G(1)(e) Describe:**

The Permittee shall provide certification of the capacity factor of the equipment to the Department with support documentation in Annual Emissions certification Report. The Permittee shall submit a list of trained operators to the Department upon request.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No. FSC-BS-AuxBlr 1 and FSC-BS-AuxBlr 2**

**General Reference: 40 CFR 63 Subpart DDDDD**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

§63.7485 - Am I subject to this subpart?

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of HAP, except as specified in §63.7491. For purposes of this subpart, a major source of HAP is as defined in §63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in §63.7575.

§63.7495 - When do I have to comply with this subpart?

“(b) If you have an existing boiler or process heater, you must comply with this subpart no later than January 31, 2016, except as provided in §63.6(i).”

“(d) You must meet the notification requirements in §63.7545 according to the schedule in §63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.”

§63.7500 - What emission limitations, work practice standards, and operating limits must I meet?

“(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.”

“(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in §63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.”

Limited-use boiler or process heater means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable average annual capacity factor of no more than 10 percent.

**Operational Limit**

In order to meet the definition of a “Limited-use boiler” under 40 CFR Part 63, Subpart DDDDD, the Permittee shall limit the annual capacity factor, as defined in §63.7575, for FSC-BS-AuxBlr1 and FSC-BS-AuxBlr2 to no more than 10 percent.

**Permit Shield Request: Yes**

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x

Semi-Annual Monitoring Report:   x  

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR 63.7530 Describe:**

Control of HAPs Emissions

§63.7530 - How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?

“(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.7545(e).”

Continuous Compliance Requirements

§63.7540 - How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

“(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 13 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.”

“(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to limited-use boilers and process heaters, as defined in §63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may

be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up;

and

(C) The type and amount of fuel used over the 12 months prior to the tune up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.”

**Testing Reference: 40 CFR 63.7510(e), and 40 CFR 63.7515(e) Describe:**

Control of HAPs Emissions

§63.7510 - What are my initial compliance requirements and by what date must I conduct them?

“(e) For existing affected sources (as defined in §63.7490), you must complete the initial compliance demonstration, as specified in paragraphs

(a) through (d) of this section, no later than 180 days after the compliance date that is specified for your source in §63.7495 and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in §63.7540(a)(10)(i) through (vi) no later than the compliance date specified in §63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in §63.7495.

Note: Limited use boilers are exempt from the energy assessment requirement.

§63.7515 - When must I conduct subsequent performance tests, fuel analyses, or tune-ups?

“(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to §63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in §63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in §63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in §63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in §63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after the initial startup of the new or reconstructed affected source.”

**Record Keeping Reference: COMAR 26.11.03.03C(5)(g) 40 CFR 63.7555 and 40 CFR 63.7560 Describe:**

Note: All records must be maintained for a period of 5 years.

§63.7555 - What records must I keep?

“(a) You must keep records according to paragraphs (a)(1) and (2) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in

§63.10(b)(2)(viii).

(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.”

§63.7560 - In what form and how long must I keep my records?

“(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years.”

**Reporting Reference: 40 CFR 63.7550, 40 CFR 63.7545 and Table 9 of 40 CFR 63, Subpart DDDDD Describe:**

§63.7545 - What notifications must I submit and when?

“(a) You must submit to the Administrator all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

“(e) If you are required to conduct an initial compliance demonstration as specified in §63.7530, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8), as applicable. If you are not required to conduct an initial compliance demonstration as specified in §63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) and must be submitted within 60 days of the compliance date specified at §63.7495(b).” “(8) In addition to the information required in §63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) “This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR part 63 subpart DDDDD at this site according to the procedures in §63.7540(a)(10)(i) through (vi).”

§63.7550 - What reports must I submit and when?

“(a) You must submit each report in Table 9 to this subpart that applies to you.

You Must Submit a(n)	The report must contain	You must submit the report
Compliance Report	Information required in §63.7550(c)(1) through (5); and	Semiannually, annually, biennially, or every 5 years according to the requirements in §63.7550(b).

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct an annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in §63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in §63.7495.

(2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in §63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.

(4) Each subsequent compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to the requirements of a tune up they must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of this section, (xiv) and (xvii) of this section, and paragraph (c) (5)(iv) of this section for limited-use boiler or process heater.

“(5)(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) The total operating time during the reporting period.”

“(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12)

respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.”

“(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.”

“(3) You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA’s CDX). You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site

(<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.”

**Frequency of submittal of the compliance demonstration: Semi-Annual**



**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-MH  
General Reference: COMAR 26.11.06.02C

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

A. Visible Emissions Limitation  
Visible Emission Standards.

"In Areas III and IV a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers."

The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications or adjustments, or occasional cleaning of control equipment, if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.

**Note:** The VE limit applies only to confined sources which include coal and flyash storage silos.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** COMAR 26.11.03.06C **Describe:**

A. Control of Visible Emissions

The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMPs) that will be used to prevent particulate matter from becoming airborne.

The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the ash handling and solid fossil fuel handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material.



**Testing Reference: None Describe:**

See Monitoring Requirements

**Record Keeping Reference: COMAR 26.11.03.06C Describe:**

A. Control of Visible Emissions

The Permittee shall keep the results of the monthly inspections for a period of five (5) years.

The Permittee shall maintain the written BMP at the facility and make it available to the Department upon request.

**Reporting Reference: COMAR 26.11.03.06C Describe:**

A. Control of Visible Emissions

The Permittee shall report the results of the inspections and/or testing and provide a copy of the current BMP plan upon request by the Department.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-MH

**General Reference:** COMAR 26.11.06.03(B), (C), and (D)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

**B. Control of Particulate Matter Emissions**

B1 - Particulate Matter from Confined Sources.

(2) Areas III and IV. (a) A person may not cause or permit to be discharged into the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SC FD (68.7 mg/dscm).

B2 - Particulate Matter from Unconfined Sources.

(1) A person may not cause or permit emissions from an unconfined source without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, when appropriate as determined by the Department, the installation and use of hoods, fans, and dust collectors to enclose, capture, and vent emissions. In making this determination, the Department shall consider technological feasibility, practicality, economic impact, and the environmental consequences of the decision.

B3 - Particulate Matter from Materials Handling and Construction.

A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** COMAR 26.11.03.06C **Describe:**

**B. Control of Particulate Matter**

B1, B2, B3 - The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMPs) that will be used to prevent particulate matter from becoming airborne.

The Permittee shall update Brandon Shores Best Management Practices (BMP) Plan, as required by the initial Part 70 permit for this facility when a revision is needed to ensure that reasonable precautions will be used to prevent particulate matter from this equipment from becoming airborne and that adequate inspection will be conducted and documented. The BMP shall include provisions for routine inspections of emission sources and controls, corrective measures, and recordkeeping for such.

The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the ash handling and solid fossil fuel handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material.

**Testing Reference: None Describe:**

See Monitoring Requirements

**Record Keeping Reference: COMAR 26.11.03.06C Describe:**

B. Control of Particulate Matter

B1, B2, B3 - The Permittee shall keep the results of the monthly inspections for a period of five (5) years.

The Permittee shall maintain the written reasonable precautions (BMP) at the facility and make it available to the Department upon request.

**Reporting Reference: COMAR 26.11.03.06C Describe:**

B. Control of Particulate Matter

B1, B2, B3 - The Permittee shall report the results of the inspections and/or testing and a provide copy of the current BMP plan upon request by the Department.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-MH  
General Reference: 40 CFR 60.254

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

40 CFR Part 60, Subpart Y—Standards of Performance for Coal Preparation and Processing Plants

(b) On and after the date on which the performance test is conducted or required to be completed under §60.8, whichever date comes first, an owner or operator of any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified after April 28, 2008, must meet the requirements in paragraphs (b)(1) through (3) of this section, as applicable to the affected facility.

(1) Except as provided in paragraph (b)(3) of this section, the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit 10 percent opacity or greater.

(2) The owner or operator must not cause to be discharged into the atmosphere from any mechanical vent on an affected facility gases which contain particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf).

(3) Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of paragraph (b)(1) of this section.

**NOTE: This limit only applies to the four (4) coal conveyors that transport coal to and from the coal additive mixing facility.**

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring: Reference:** None Describe:

See Record Keeping Requirements

**Testing Reference: 40 CFR 60.255 Describe:**

(b) An owner or operator of each affected facility that commenced construction, reconstruction, or modification after April 28, 2008, must conduct performance tests according to the requirements of §60.8 and the methods identified in §60.257 to demonstrate compliance with the applicable emissions standards in this subpart as specified in paragraphs (b)(1) and (2) of this section.

(2) For each affected facility subject to an opacity standard, an initial performance test must be performed. Thereafter, a new performance test must be conducted according to the requirements in paragraphs (b)(2)(i) through (iii) of this section, as applicable, except as provided for in paragraphs (e) and (f) of this section. Performance test and other compliance requirements for coal truck dump operations are specified in paragraph (h) of this section.

(i) If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test must be conducted within 90 operating days of the date that the previous performance test was required to be completed.

(ii) If all 6-minute average opacity readings in the most recent performance test are equal to or less than half the applicable opacity limit, a new performance test must be conducted within 12 calendar months of the date that the previous performance test was required to be completed.

(iii) An owner or operator of an affected facility continuously monitoring scrubber parameters as specified in §60.256(b)(2) is exempt from the requirements in paragraphs (b)(2)(i) and (ii) if opacity performance tests are conducted concurrently with (or within a 60-minute period of) PM performance tests.

(c) If any affected coal processing and conveying equipment (e.g., breakers, crushers, screens, conveying systems), coal storage systems, or coal transfer and loading systems that commenced construction, reconstruction, or modification after April 28, 2008, are enclosed in a building, and emissions from the building do not exceed any of the standards in § 60.254 that apply to the affected facility, then the facility shall be deemed to be in compliance with such standards.

**Record Keeping Reference: 40 CFR 60.258(a) Describe:**

The owner or operator of a coal preparation and processing plant that commenced construction, reconstruction, or modification after April 28, 2008, shall maintain in a logbook (written or electronic) on-site and make it available upon request. The logbook shall record the following:

(1) The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from manufacturer recommendation, if any, shall be noted.

(2) The date and time of periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted.

- (3) The amount and type of coal processed each calendar month.
- (4) The amount of chemical stabilizer or water purchased for use in the coal preparation and processing plant.
- (5) Monthly certification that the dust suppressant systems were operational when any coal was processed and that manufacturer's recommendations were followed for all control systems. Any variance from the manufacturer's recommendations, if any, shall be noted.
- (6) Monthly certification that the fugitive coal dust emissions control plan was implemented as described. Any variance from the plan, if any, shall be noted. A copy of the applicable fugitive coal dust emissions control plan and any letters from the Administrator providing approval of any alternative control measures shall be maintained with the logbook. Any actions, e.g. objections, to the plan and any actions relative to the alternative control measures, e.g. approvals, shall be noted in the logbook as well.

**Reporting Reference:** 40 CFR 60.7, 60.258(b)(3), 60.258(d)      **Describe:**

(b) For the purpose of reports required under section 60.7(c), any owner operator subject to the provisions of this subpart also shall report semiannually periods of excess emissions as follow:

(3) All 6-minute average opacities that exceed the applicable standard.

(d) After July 1, 2011, within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with this subpart, the owner or operator of the affected facility must submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE data base available at <http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main>. For performance tests that cannot be entered into WebFIRE (i.e., Method 9 of appendix A-4 of this part opacity performance tests) the owner or operator of the affected facility must mail a summary copy to United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; mail code: D243-01; RTP, NC 27711.

Frequency of submittal of the compliance demonstration: Annual

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-BS-LSH and FSC-BS-GH**

**General Reference: COMAR 26.11.06.03C and D, and 40 CFR 60.672(b)**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

Particulate Matter from Unconfined Sources.

(1) A person may not cause or permit emissions from an unconfined source without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, when appropriate as determined by the Department, the installation and use of hoods, fans, and dust collectors to enclose, capture, and vent emissions. In making this determination, the Department shall consider technological feasibility, practicality, economic impact, and the environmental consequences of the decision.

Particulate Matter from Materials Handling and Construction.

(2) A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

For FSC-BS-LSH only

(3) Subpart OOO-Standards of Performance for Nonmetallic Mineral Processing Plants Standard for particulate matter (PM).

"(b) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems."

<p><b>For:</b></p>	<p><b>The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevator, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affect facility (as defined in §§60.670 and 60.671)</b></p>	<p><b>The owner or operator must meet the following fugitives emissions limit for crushers at which a capture system is not used</b></p>	<p><b>The owner or operator must demonstrate compliance with these limits by conducting</b></p>
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Affected facilities (as defined in §§60.670 and 60.671) that Commenced construction, modification, or reconstruction after April 31, 1983 but before April 22, 2008	10 percent opacity	15 percent opacity	An initial performance test according to §60, 11 of this part and §60.675 of this subpart.
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"(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with emission limits in paragraphs (a) and (b) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

- (1) Fugitive emissions from the building openings (except for vents as defined in §60.671) must not exceed 7 percent opacity: and
- (2) Vents (as defined in §60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of this subpart."

<b>For:</b>	<b>The owner or operator must meet a PM limit of</b>	<b>The owner or operator must meet an opacity limit of</b>	<b>The owner or operator must demonstrate compliance with these limits by conducting</b>
Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	0.05 g/dscm (0.022 gr/dscf)	7 percent for dry control devices	An initial performance test according to §60.8 of this part and §60.675 of this subpart; 676(c), (d), and (e).

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:



**Monitoring Reference: COMAR 26.11.03.06C and 40 CFR 60.674(b) Describe:**

Control of Particulate Matter

(1) and (2) The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMPs) that will be used to prevent particulate matter from becoming airborne.

The Permittee shall update Brandon Shores Best Management Practices (BMP) Plan, as required by the initial Part 70 permit for this facility when a revision is needed to ensure that reasonable precautions will be used to prevent particulate matter from this equipment from becoming airborne and that adequate inspection will be conducted and documented. The BMP shall include provisions for routine inspections of emission sources and controls, corrective measures, and recordkeeping for such.

The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the limestone and gypsum handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material.

For FSC-BS-LSH only

(3) NSPS PM Standard

Monitoring of Operations.

"(b) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b).

(1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:

(i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and §60.676(b), and

(ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under §60.11 of this part and §60.675 of this subpart.

(2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook

entry required under §60.676(b) must specify the control mechanism being used instead of the water sprays."

**Testing Reference: 40 CFR 60.675 Describe:**

Control of Particulate Matter Emissions  
(1) and (2) See monitoring requirement

For FSC-BS-LSH only  
(3) NSPS PM Standard

Test methods and procedures.

"(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendices A-1 through A-7 of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section."

**Record Keeping Reference: COMAR 26.11.03.06C and 40 CFR 60.674(b) Describe:**

Control of Particulate Matter

(1) and (2) The Permittee shall keep the results of the monthly inspections for a period of five (5) years.

The Permittee shall maintain the written reasonable precautions (BMPs) at the facility and make it available to the Department upon request.

For FSC-BS-LSH only  
(3) NSPS PM Standard

Record Keeping

"(b)(1) Owners or operators of affected facilities (as defined in §§60.670 ad 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under §60.6744(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request."

**Reporting Reference: COMAR 26.11.03.06C and 40 CFR 60.674(f) Describe:**

Control of Particulate Matter

(1) and (2) The Permittee shall report the results of the inspections and provide a copy of the current BMP plan upon request by the Department.

For FSC-BS-LSH only  
(3) NSPS Particulate Matter Standard

Reporting

"(f) The owner or operator of any affected facility shall submit written reports of the results all performance tests conducted to demonstrate compliance with the standards set forth in

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§60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A-4) to demonstrate compliance with §60.672(b), (e) and (f)."  
All notifications and reports required by applicable subparts of 40 CFR 60 unless specified otherwise, shall be submitted to:

Administrator, Compliance Program  
Air and Radiation Management Administration  
1800 Washington Boulevard  
Baltimore, Maryland 21230

and  
Director, Air Protection Division  
US Environmental Protection Agency - Region III  
Mail Code 3AP00  
1650 Arch Street, Philadelphia, Pennsylvania 19103-2029

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-QP  
General Reference: COMAR 26.11.09.05E

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

A. Control Visible Emissions

A1 - Stationary Internal Combustion Engine Powered Equipment

"Emissions During Idle Mode. A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity. This requirement is not applicable during Preventative Maintenance.

Emissions During Operating Mode. A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity. This requirement is not applicable during Preventative Maintenance.

Exceptions.

- (a) Section E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.
- (b) Section E(2) does not apply to emissions resulting directly from cold engine startup and warm-up for the following maximum periods:
  - (i) Engines that are idled continuously when not in service: 30 minutes;
  - (ii) All other engines: 15 minutes.
- (c) Section E(2) and (3) does not apply while maintenance, repair, or testing is being performed by qualified mechanics."

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** COMAR 26.11.03.06C Describe:

The Permittee shall properly operate and maintain the engines in a manner to minimize visible emissions.

**Testing Reference:** None Describe:

See Monitoring Requirements

**Record Keeping Reference: COMAR 26.11.03.06C Describe:**

The Permittee shall retain records of preventative maintenance that relate to combustion performance on site for at least 5 years and make these records available to the Department upon request.

**Reporting Reference: Part 70 Operating Permit No. 24-003-00468 Section III, Condition 4**

**Describe:**

The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations."

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-QP  
**General Reference:** 40 CFR 60 Subpart III

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

A. Visible Emissions Limitations

A2 - Standards of Performance (NSPS) for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE).

§ 89.113 Smoke emission standard.

(a) Exhaust opacity from compression- ignition nonroad engines for which this subpart is applicable must not exceed:

- (1) 20 percent during the acceleration mode;
- (2) 15 percent during the lugging mode; and
- (3) 50 percent during the peaks in either the acceleration or lugging modes.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** 40 CFR 60.4211(a) **Describe:**

A2. The Permittee must operate and maintain the stationary CI internal combustion engine according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer.

**Testing Reference:** 40 CFR 60 – Subpart III **Describe:**

See Monitoring Requirements

**Record Keeping Reference:** 40 CFR 60 III **Describe:**

Comply with Tier III requirements.

**Reporting Reference: 40 CFR 60 – Subpart III Describe:**

See operational limitations in Section 5.4H.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-QP

General Reference: 40 CFR 60.4205b, 40 CFR 60.4202

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

B. Control of Particulate Matter Emissions

“(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.”

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR 60, Subpart IIII Describe:**

See operational limitations in Section 5.4H

**Testing Reference: 40 CFR 60 Subpart IIII Describe:**

See Monitoring Requirements

**Record Keeping Reference: 40 CFR 60, Subpart IIII Describe:**

See operational limitations in Section 5.4H

**Reporting Reference: 40 CFR 60, Subpart IIII Describe:**

See operational limitations in Section 5.4H

**Frequency of submittal of the compliance demonstration: Semi-Annual**



**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-QP

General Reference: COMAR 26.11.09.07A(2)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C. Control of Sulfur Oxides Emissions

C1 - Sulfur Oxides from fuel burning equipment.

"A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:

(2) In Areas III and IV:

(b) Distillate fuel oils, 0.3 percent."

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: COMAR 26.11.03.06C Describe:**

The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil is in compliance with the limitation on the sulfur content of the fuel oil or obtain sulfur in fuel analyses of oil that is representative of the oil burned.

**Testing Reference: 40 CFR 60 – Subpart IIII Describe:**

See Monitoring Requirements

**Record Keeping Reference: COMAR 26.11.09.07C Describe:**

The Permittee shall maintain records of fuel supplier's certification or sulfur in fuel analyses and shall make records available to the Department upon request.

**Reporting Reference: COMAR 26.11.09.07C Describe:**

The Permittee shall report fuel supplier certification or a copy of the sulfur in fuel analyses to the Department upon request.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-QP  
General Reference: 40 CFR 60.4207

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C. Control of Sulfur Oxides

C2 - "What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?"

"(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.51 O(b) for nonroad diesel fuel."

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** 40 CFR 60 - Subpart IIII Describe:

Comply with Tier III requirements

**Testing Reference:** None Describe:

See Monitoring Requirements.

**Record Keeping Reference:** 40 CFR 60 - Subpart IIII Describe:

Comply with Tier III requirements

**Reporting Reference:** 40 CFR 60 - Subpart IIII Describe:

Comply with Tier III requirements

**Frequency of submittal of the compliance demonstration:** Semi-Annual

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-QP  
General Reference: COMAR 26.11.09.08G

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D. Control of Nitrogen Oxides Emissions

D1 - NO<sub>x</sub> RACT

Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 percent or less

(1) A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

- (a) Provide certification of the capacity factor of the equipment to the Department in writing;
- (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
- (c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;
- (d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
- (e) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request."

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** COMAR 26.11.03.06C Describe:

The Permittee shall calculate the capacity factor of the engines for each calendar year within 30 days after the end of each year.

**Testing Reference:** COMAR 26.11.09.08G(1)(b) Describe:

The Permittee shall perform a combustion analysis and optimize combustion at least once annually when the hours of operation exceed 500 during the year.

**Record Keeping Reference: COMAR 26.11.03.06C, COMAR 26.11.02.19.C(1)(b), COMAR 26.11.09.08G(1)(c), COMAR 26.11.09.08G(1)(e) Describe:**

The Permittee shall maintain:

- (1) Records of the calculated capacity factors.
- (2) Records of hour of operation.
- (3) Records of combustion analysis performed if the hours of operation exceed 500.
- (4) Record of training program attendance for each operator.

**Reporting Reference: COMAR 26.11.09.08G(1)(a), COMAR 26.11.03.06C, COMAR 26.11.09.08G(1)(e) Describe:**

The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report.

The Permittee shall submit a record of training program attendance for each operator to the Department upon request.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-QP

General Reference: 40 CFR 60.4205b, 40 CFR 60.4202

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D. Control of Nitrogen Oxides

D2 - NSPS Subpart IIII

What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

"(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE."

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** 40 CFR 60.4211(a) **Describe:**

The Permittee must operate and maintain the stationary CI internal combustion engine according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer.

**Testing Reference:** None **Describe:**

See Monitoring Requirements

**Record Keeping Reference:** 40 CFR 60- Subpart IIII **Describe:**

Comply with Tier III requirements.

**Reporting Reference:** None **Describe:**

**Frequency of submittal of the compliance demonstration:** Semi-Annual

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-QP

General Reference: CPCN 9075 Section VI Condition 20

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

E. Control of VOC Emissions

"To meet LAER for the two nominal 500-horsepower diesel-fired quench pumps, the Permittee shall install units designed so the missions of volatile organic compound (VOCs) from each of the two units shall not exceed the Tier III limits (2008) standards in g/hp-hr."

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: Describe:**

Comply with Tier III requirements

**Testing Reference: None Describe:**

Comply with Tier III requirements

**Record Keeping Reference: None Describe:**

Comply with Tier III requirements

**Reporting Reference: None Describe:**

Comply with Tier III requirements

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-QP

General Reference: CPCN 9075 Section V condition 17c

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

F. Control of Carbon Monoxide (CO) Emissions

F1 - BACT Requirement

"To meet the BACT for CO from the two nominal 500-horsepower diesel-fired quench pumps, the Permittee shall install engines designed so that emissions of carbon monoxide (CO) from each of the two units shall not exceed the Tier III limits (2008) standards in grams per horsepower-hour (G-hp-hr)."

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: Describe:**

Comply with Tier III requirements

**Testing Reference: None Describe:**

Comply with Tier III requirements

**Record Keeping Reference: None Describe:**

Comply with Tier III requirements

**Reporting Reference: None Describe:**

Comply with Tier III requirements

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-QP

General Reference: 40 CFR 60.4205b, 40 CFR 60.4202

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

F. Control of Carbon Monoxide (CO) Emissions

F2 - NSPS Subpart IIII

What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

"(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE."

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** None Describe:

Comply with Tier III requirements

**Testing Reference:** None Describe:

Comply with Tier III requirements

**Record Keeping Reference:** None Describe:

Comply with Tier III requirements

**Reporting Reference:** None Describe:

Comply with Tier III requirements

**Frequency of submittal of the compliance demonstration:** Semi-Annual



**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-QP  
**General Reference:** 40 CFR 63.6590

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

G. Control of Hazardous Air Pollutants (HAPS) Emissions  
40CFR 63 Subpart ZZZZ-National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Stationary RICE subject to Regulations under 40 CFR 60.  
An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part. (6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.”

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** 40 CFR 63.6590(c) **Describe:**

Comply with NSPS Subpart IIII requirements

**Testing Reference:** 40 CFR 63.6590(c) **Describe:**

Comply with NSPS Subpart IIII requirements

**Record Keeping Reference:** 40 CFR 63.6590(c) **Describe:**

Comply with NSPS Subpart IIII requirements

**Reporting Reference:** 40 CFR 63.6590(c) **Describe:**

Comply with NSPS Subpart IIII requirements

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-BS-QP**

**General Reference: 40 CFR 60.4209(a), 40 CFR 60.4206, 40 CFR 60.4211(a) and (e)**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

H. NSPS subpart IIII Operational limitations

What are the monitoring requirements if I am an owner or operator of a stationary combustion engine?

"(a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine."

How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

"Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine."

What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

"(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you."

"(e) Owners or operators may operate the stationary CI ICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government...the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing shall be limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local government standards require maintenance and testing of emergency ICE beyond 100 hours per year. Any operation other than emergency operation, and maintenance and testing, is prohibited.

**Permit Shield Request: Yes**

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

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- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

**Monitoring Reference: None Describe:**

See Record Keeping Requirements

**Testing Reference: None Describe:**

See Record Keeping Requirements

**Record Keeping Reference: COMAR 26.11.03.06C Describe:**

(1) The Permittee shall maintain a log for the emergency generator indicating the amounts of fuel oil combusted or the hours of operation, and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.).

(2) The Permittee shall maintain on site for the life of the source the following records for the emergency diesel generator(s):

(a) Documentation of the manufacture date of the diesel engine, if manufactured prior to April 1, 2006 and the manufacturer model year of the diesel engine;

(b) The installation date of each emergency diesel generator; and

(c) The certifications of compliance or manufacturer engine test data required by 40 CFR §60.4211 and §60.4214(b)

(3) Beginning October 1, 2007, for any NSPS emergency diesel generator the Permittee shall for each fuel delivery obtain from the fuel supplier a fuel supplier certification consisting of the name of the oil supplier, the date of delivery, the amount of fuel delivered, and a statement from the fuel supplier that the diesel fuel oil complies with the specifications of 40 CFR §80.510.

The Permittee shall maintain the required records on site for at least five (5) years.

**Reporting Reference: COMAR 26.11.03.06C Describe:**

The Permittee shall report the amounts of fuel oil combusted or the hours of operation, and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.) to the Department in the annual emission certification report due on April 1 of each year.

**Frequency of submittal of the compliance demonstration: Annual**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-HAW-Unit 1

General Reference: 40 CFR 63 Part 63, Subpart UUUUU

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

FSC-HAW-Unit1 operates as a natural gas fired unit in accordance with 40 CFR 63.9983(c) and is therefore not subject to the MATS rule.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

**Monitoring Reference:** None Describe:

**Testing Reference:** None Describe:

**Record Keeping Reference:** None Describe:

**Reporting Reference:** None Describe:

**Frequency of submittal of the compliance demonstration:** Annual

**Section 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-HAW-Unit 1, FSC-HAW-Unit 2, and FSC-HAW-Unit 4**

**General Reference: NO<sub>x</sub> RACT Averaging Plan Consent Order-February 18, 2016**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D. Control of NO<sub>x</sub> Emissions

D1 - NO<sub>x</sub> RACT requirements

Table 1 – Summary of NOX RACT Averaging Plan Limits (2016)

Table 1 – Summary of NO <sub>x</sub> RACT Averaging Plan Limits (2016)		
Facility	Unit	RACT Limit lb/MMBtu
Brandon Shores	1	0.5
	2	0.5
H.A. Wagner	1	0.3
	2	0.3
	3	0.5
	4	0.3

Individual unit compliance with NOX RACT requirements will be determined daily on a 30-day rolling average basis. Annual compliance will also be demonstrated by showing that annual mass emissions from the units in the averaging plan are less than 80% of the mass emissions that would have been allowed on an individual basis.

The following methodology will be used to calculate 30-day rolling emissions and determine compliance:

(1) Calculate daily system and NOX RACT emission rates:

$$ER_{System} = \Sigma (ER_i * (H_{li} / H_{ITotal}))$$

$$ERRACT = \Sigma (ERRACT_{,i} * (H_{li} / H_{ITotal}))$$

where:

ER<sub>System</sub> = System average emission rate, lb/MMBtu

ERRACT = System average NOX RACT limit, lb/MMBtu

ER<sub>i</sub> = Daily emission rate for unit i, lb/MMBtu

ERRACT<sub>,i</sub> = Daily NOX RACT limit for unit i, lb/MMBtu

H<sub>li</sub> = Daily heat input for unit i, MMBtu

$HITotal = \text{Daily heat for all of the units} = \sum H_{li}, \text{ MMBtu}$

(2) After 30 days, calculate 30-day rolling emission rate for the system and the NOX RACT:

$ER30 \text{ Day System} = (\sum (ER_{System})) / 30$

$ER30 \text{ Day RACT} = (\sum (ERRACT)) / 30$

where:

$ER30 \text{ Day System} = 30\text{-day rolling system average emission rate, MMBtu/lb}$

$ER30 \text{ Day RACT} = 30\text{-day rolling system average emission rate, MMBtu/lb}$

(3) Calculate mass emissions on a daily basis:

$NOX \ 30 \ \text{Day System} = ER30 \ \text{Day System} * HITotal / 2000$

$NOX \ \text{RACT} = ER30 \ \text{Day RACT} * HITotal / 2000$

where:

$NOX \ 30 \ \text{Day System} = NOX \ \text{mass emissions based on a 30-day rolling system average emission rate, tons}$

$NOX \ \text{RACT} = NOX \ \text{mass emissions based on a 30-day rolling RACT limit, tons}$

(4) Determine compliance with NOX RACT:

$NOX \ \text{System} < NOX \ \text{RACT}$

In addition on a yearly basis Raven Power will certify that the NOX mass emissions for the six units included in the averaging plan did not exceed 80% of the emissions allowable under the NOX RACT limits.

$NOX \ \text{Annual System} < 0.80 * NOXRACT \ \text{Total}$

where:

$NOX \ \text{Annual System} = \text{Annual NOX mass emissions for the units in the averaging plan}$

$NOX \ \text{RACT Total} = \text{Allowable NOX mass emissions based on the NOX RACT limits}$

**Permit Shield Request: Yes**

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference: COMAR 26.11.09.08C(3), COMAR 26.11.09.08B(2)(b), Consent Agreement dated February 18, 2016 Describe:**

All the units included in the Averaging Plan have continuous emissions monitors (CEM) for monitoring NOX emissions. These units follow the operations, maintenance, recordkeeping, and reporting requirements contained in 40 CFR Part 75.

The Permittee shall operate, calibrate, and maintain a certified NO<sub>x</sub> CEM or an alternative NO<sub>x</sub> monitoring method approved by the Department and the EPA on each installation.

The Permittee certify CEMs in accordance with Part 75, Appendix A.

**Testing Reference: 40 CFR Part 75 Describe:**

See monitoring requirements

**Record Keeping Reference: COMAR 26.11.01.11A(2), COMAR 26.11.01.11E Describe:**

The Permittee shall maintain at each of the Generating Units records and information adequate to verify the calculations used to demonstrate compliance with the Averaging Plan's requirements, and shall make these records and information available to the Department upon request. The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E.

**Reporting Reference: COMAR 26.11.01.11E(2) and COMAR 26.11.09.08K(1), Consent Agreement dated February 18, 2016 Describe:**

Quarterly reports will be submitted within 30 days of the end of each reporting quarter summarizing compliance with the Averaging Plan.

The Permittee shall submit quarterly emission reports of CEM data to the Department on or before the thirtieth day of the month following the end of each calendar quarter."

The Permittee shall comply with the reporting requirements of COMAR 26.11.01.11E. (Record Keeping and Reporting Requirements).

**Frequency of submittal of the compliance demonstration: Quarterly**



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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-HAW-Unit 4

General Reference: 40 CFR 63 Part 63, Subpart UUUUU, Table 3

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

FSC-HAW-Unit4 operates as limited-use liquid oil fired unit and is only subject to tune-up requirements.

Limited-use liquid oil-fired subcategory means an oil-fired electric utility steam generating unit with an annual capacity factor of less than 8 percent of its maximum or nameplate heat input, whichever is greater, averaged over a 24-month block contiguous period commencing (§63.10042).

Conduct a tune-up of the EGU burner and combustion controls at least each 36 calendar months, or each 48 calendar months if neural network combustion optimization software is employed, as specified in § 63.10021(e).

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

**Monitoring Reference:** None Describe:

**Testing Reference:** 40 CFR 63.10021(e)(1)-(7) Describe:

If you must conduct periodic performance tune-ups of your EGU(s), as specified in paragraphs (e)(1) through (9) of this section, perform the first tune-up as part of your initial compliance demonstration. Notwithstanding this requirement, you may delay the first burner inspection until the next scheduled unit outage provided you meet the requirements of § 63.10005. Subsequently, you must perform an inspection of the burner at least once every 36 calendar months unless your EGU employs neural network combustion optimization during normal operations in which case you must perform an inspection of the burner and combustion controls at least once every 48 calendar months.

40 CFR 63.10021(e)(1)

As applicable, inspect the burner and combustion controls, and clean or replace any components of the burner or combustion controls as necessary upon initiation of the work

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practice program and at least once every required inspection period. Repair of a burner or combustion control component requiring special order parts may be scheduled as follows:

40 CFR 63.10021(e)(1)(i)

Burner or combustion control component parts needing replacement that affect the ability to optimize NO<sub>x</sub> and CO must be installed within 3 calendar months after the burner inspection,

40 CFR 63.10021(e)(1)(ii)

Burner or combustion control component parts that do not affect the ability to optimize NO<sub>x</sub> and CO may be installed on a schedule determined by the operator;

40 CFR 63.10021(e)(2)

As applicable, inspect the flame pattern and make any adjustments to the burner or combustion controls necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available, or in accordance with best combustion engineering practice for that burner type;

40 CFR 63.10021(e)(3)

As applicable, observe the damper operations as a function of mill and/or cyclone loadings, cyclone and pulverizer coal feeder loadings, or other pulverizer and coal mill performance parameters, making adjustments and effecting repair to dampers, controls, mills, pulverizers, cyclones, and sensors;

40 CFR 63.10021(e)(4)

As applicable, evaluate windbox pressures and air proportions, making adjustments and effecting repair to dampers, actuators, controls, and sensors;

40 CFR 63.10021(e)(5)

Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly. Such inspection may include calibrating excess O<sub>2</sub> probes and/or sensors, adjusting overfire air systems, changing software parameters, and calibrating associated actuators and dampers to ensure that the systems are operated as designed. Any component out of calibration, in or near failure, or in a state that is likely to negate combustion optimization efforts prior to the next tune-up, should be corrected or repaired as necessary;

40 CFR 63.10021(e)(6)

Optimize combustion to minimize generation of CO and NO<sub>x</sub>. This optimization should be consistent with the manufacturer's specifications, if available, or best combustion engineering practice for the applicable burner type. NO<sub>x</sub> optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, adjusting combustion zone temperature profiles, and add-on controls such as SCR and SNCR; CO optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, and adjusting combustion zone temperature profiles;

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40 CFR 63.10021(e)(7)

While operating at full load or the predominantly operated load, measure the concentration in the effluent stream of CO and NO<sub>x</sub> in ppm, by volume, and oxygen in volume percent, before and after the tune-up adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). You may use portable CO, NO<sub>x</sub> and O<sub>2</sub> monitors for this measurement. EGU's employing neural network optimization systems need only provide a single pre- and post-tune-up value rather than continual values before and after each optimization adjustment made by the system;

**Record Keeping Reference: 40 CFR 63.10021(e)(8), 40 CFR 63.10009(j), 40 CFR 63.10032, 40 CFR 63.10033 Describe:**

Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (e)(1) through (e)(9) of this section including:

40 CFR 63.10021(e)(8)(i)

The concentrations of CO and NO<sub>x</sub> in the effluent stream in ppm by volume, and oxygen in volume percent, measured before and after an adjustment of the EGU combustion systems;

40 CFR 63.10021(e)(8)(ii)

A description of any corrective actions taken as a part of the combustion adjustment; and

40 CFR 63.10021(e)(8)(iii)

The type(s) and amount(s) of fuel used over the 12 calendar months prior to an adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period

Compliance will also be demonstrated by meeting all applicable record keeping requirements under 40 CFR 63.10032 and 40 CFR 63.10033.

**Reporting Reference: 40 CFR 63.10021(e)(9), 40 CFR 63.10030, 40 CFR 63.10031 Describe:**

Report the dates of the initial and subsequent tune-ups as follows:

40 CFR 63.10021(e)(9)(i)

If the first required tune-up is performed as part of the initial compliance demonstration, report the date of the tune-up in hard copy (as specified in § 63.10030) and electronically (as specified in § 63.10031). Report the date of each subsequent tune-up electronically (as specified in § 63.10031).

40 CFR 63.10021(e)(9)(ii)

If the first tune-up is not conducted as part of the initial compliance demonstration, but is postponed until the next unit outage, report the date of that tune-up and all subsequent tune-ups electronically, in accordance with § 63.10031.

Compliance will be demonstrated by meeting all applicable reporting requirements under 40 CFR

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63.10030 and 40 CFR 63.10031.

**Frequency of submittal of the compliance demonstration: Annual**

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**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-HAW-Unit 1 and FSC-HAW-Unit 4

**General Reference:** COMAR 26.11.09.05A(2)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

**A. Control of Visible Emissions**

Fuel Burning Equipment. "In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

Exceptions. "Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, start-up, or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring: Reference:** COMAR 26.11.01.10 **Describe:**

The Permittee shall continuously monitor opacity of the stack gases using a continuous opacity monitor that is certified in accordance with 40 CFR Part 60, Appendix B and that meets the quality assurance criteria of COMAR 26.11.31.06.

**Testing Reference:** None **Describe:**

See Monitoring Requirements

**Record Keeping Reference:** COMAR 26.11.01.10E **Describe:**

All information required by this regulation to be maintained or reported to the Department shall be retained and made available for review by the Department for a minimum of 5 years from the time the report is submitted.

**Reporting Reference: COMAR 26.11.01.10D(1) & D(2) Describe:**

(1) System Downtime Reporting Requirements.

(a) All COM downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the first day on which downtime occurs.

(b) The COM downtime report shall include the reason, if known, for the breakdown and the estimated period of time that the COM will be down. The owner or operator shall notify the Department by telephone when the COM has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in 40 CFR Part 51 Appendix P, and is producing data.

(c) Except as otherwise approved by the Department and the EPA, a COM shall operate in compliance with the requirements of §B(2) of this regulation and collect data for at least 95 percent of the source's operating time during any calendar quarter. The alternative measurement plan required in §B(1)(b) of this regulation shall be used at all times when the COM fails to conform to performance standards required by §B(2) of this regulation during data collection.

(2) Data Reporting Requirements.

(a) A COM shall automatically reduce all data to six-minute block averages calculated from 24 or more equally spaced data points.

(b) All COM data shall be reported in a format approved by the Department.

(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:

(i) The cause, time periods, and the opacity of all emissions which exceed the applicable quarterly, daily and hourly emission standards as provided in COMAR 26.11.09.05A(4);

(ii) The COM and installation downtimes, including the time and date of the beginning and end of each downtime period, and whether the downtime was scheduled;

(iii) The cause of all COM downtime;

(iv) The total operating time for the quarter, and the total time and percent of the operating time during the quarter that excess emissions occurred, and the percentage of COM downtime, during the calendar quarter;

(v) Quarterly quality assurance activities;

(vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status;

(vii) Other information that the Department determines is necessary to evaluate the data or to ensure that compliance is achieved.

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Frequency of submittal of the compliance demonstration: **Quarterly**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-HAW-Unit 1, FSC-HAW-Unit 4

General Reference: COMAR 26.11.09.06B(2), COMAR 26.11.09.06C

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

B. Control of Particulate Matter Emissions

Solid Fuel Burning Equipment. A person may not cause or permit particulate matter caused by the combustion of solid fuel to be discharged into the atmosphere in excess of the amounts shown in Table 1. For these units, maximum allowable emissions of particulate matter 0.03 gr/scfd @ 50% excess air.

Determination of Compliance (by stack test).

“Compliance with the particulate matter emissions standards in this regulation shall be calculated as the average of 3 test runs using EPA Test Method 5 or other United States Environmental Protection Agency test method approved by the Department.”

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring: Reference: COMAR 26.11.06.03C Describe:**

The Permittee shall comply with the CAM requirements found in Table IV-7a & 7b.

**Testing Reference: COMAR 26.11.03.06C Describe:**

The Permittee, in accordance with COMAR 26.11.01.04A(1), shall biennial testing using EPA Reference Methods of 40 CFR Part 60, Appendix A The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date.

**Record Keeping Reference: COMAR 26.11.01.05A(2) Describe:**



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The Permittee shall maintain records of the results of all particulate emission compliance tests.

**Reporting Reference: COMAR 26.11.01.04A Describe:**

The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to the proposed test date and provide a 10 days notice prior to the scheduled test date. The Permittee shall submit the stack test results to the Department in a final report within 60 days from the date of the test completion.

Frequency of submittal of the compliance demonstration: **Semi-Annual**

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**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-HAW-Unit 1, FSC-HAW-Unit 4

**General Reference:** COMAR 26.11.09.07A(2)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C1 - Control of Sulfur Oxides from Fuel Burning Equipment  
Sulfur Content Limitations for Fuel. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV:

**(c) Residual fuel oil, 1.0 percent."**

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

**Methods used to demonstrate compliance:**

**Monitoring: Reference: COMAR 26.11.03.06C Describe:**

The Permittee shall comply with the fuel analyses requirements as found in 40 CFR Part 75 Appendix D.

**Testing Reference: COMAR 26.11.03.06C Describe:**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix D - Emissions Data Protocol for Gas-Fired and Oil-Fired Units.

**Record Keeping Reference: COMAR 26.11.06.03C Describe:**

The Permittee shall retain, on site for at least 5 years, fuel oil analyses of samples collected in accordance with 40 CFR Part 75 Appendix D.

**Reporting Reference: COMAR 26.11.06.03C Describe:**

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The Permittee shall submit fuel certification reports or fuel analyses to the Department upon request.

Frequency of submittal of the compliance demonstration: **Semi-Annual**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-HAW-Unit 1, FSC-HAW-Unit 2, and FSC-HAW-Unit 4  
General Reference: 40 CFR Part 72 and Part 75

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C2 - Acid Rain Provisions.

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

**Methods used to demonstrate compliance:**

**Monitoring: Reference: §75.10(a)(1) and Acid Rain Permit Describe:**

The Permittee shall install, certify, operate, and maintain a SO<sub>2</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B- Monitoring Provisions.

**Testing Reference: 40 CFR Part 75, Appendix A, COMAR 26.11.03.06C Describe:**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A.

**Record Keeping Reference: Acid Rain Permit Describe:**

The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75.

**Reporting Reference: Acid Rain Permit Describe:**

The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75.

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Frequency of submittal of the compliance demonstration: **Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-HAW-Unit 1, FSC-HAW-Unit 2, and FSC-HAW-Unit 4  
**General Reference:** 40 CFR Part 97 Subpart CCCCC-TR

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C3 - 40 CFR Part 97 Subpart CCCCC-TR SO<sub>2</sub> Group 1 Trading Program TR SO<sub>2</sub> Group 1 Trading Program requirements (40 CFR 97.606)

**(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.613 through 97.618.

**(b) Emissions monitoring, reporting, and recordkeeping requirements.**

(1) The owners and operators, and the designated representative, of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.630 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.631 (initial monitoring system certification and recertification procedures), 97.632 (monitoring system out-of-control periods), 97.633 (notifications concerning monitoring), 97.634 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.635 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

(2) The emissions data determined in accordance with 40 CFR 97.630 through 97.635 shall be used to calculate allocations of TR SO<sub>2</sub> Group 1 allowances under 40 CFR 97.611(a)(2) and (b) and 97.612 and to determine compliance with the TR SO<sub>2</sub> Group 1 emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.630 through 97.635 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

**(c) SO<sub>2</sub> emissions requirements.** (1) TR SO<sub>2</sub> Group 1 emissions limitation.

(i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall hold, in the source's compliance account, TR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under 40 CFR 97.624(a) in an amount not less than the tons of total SO<sub>2</sub> emissions for such control period from all TR SO<sub>2</sub> Group 1 units at the source.

(ii). If total SO<sub>2</sub> emissions during a control period in a given year from the TR SO<sub>2</sub> Group 1 units at a TR SO<sub>2</sub> Group 1 source are in excess of the TR SO<sub>2</sub> Group 1 emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A). The owners and operators of the source and each TR SO<sub>2</sub> Group 1 unit at the source shall hold the TR SO<sub>2</sub> Group 1 allowances required for deduction under 40CFR 97.624(d); and

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(B). The owners and operators of the source and each TR SO<sub>2</sub> Group 1 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation 40 CFR part 97, subpart CCCCC and the Clean Air Act.

(2) TR SO<sub>2</sub> Group 1 assurance provisions.

(i). If total SO<sub>2</sub> emissions during a control period in a given year from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such SO<sub>2</sub> emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under 40 CFR 97.625(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.625(b), of multiplying—

(A). The quotient of the amount by which the common designated representative's share of such SO<sub>2</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such SO<sub>2</sub> emissions exceeds the respective common designated representative's assurance level; and

(B). The amount by which total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state for such control period exceed the state assurance level.

(ii). The owners and operators shall hold the TR SO<sub>2</sub> Group 1 allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(iii). Total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period in a given year exceed the state assurance level if such total SO<sub>2</sub> emissions exceed the sum, for such control period, of the state SO<sub>2</sub> Group 1 trading budget under 40 CFR 97.610(a) and the state's variability limit under 40 CFR 97.610(b).

(iv). It shall not be a violation of 40 CFR part 97, subpart CCCCC or of the Clean Air Act if total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total SO<sub>2</sub> emissions from the TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period exceeds the common designated representative's assurance level.

(v). To the extent the owners and operators fail to hold TR SO<sub>2</sub> Group 1 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

(A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B). Each TR SO<sub>2</sub> Group 1 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart CCCCC and the Clean Air Act.

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(3) Compliance periods.

(i). A TR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.

(ii). A TR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance.

(i). A TR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR SO<sub>2</sub> Group 1 allowance that was allocated for such control period or a control period in a prior year.

(ii). A TR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through

(iii) above for a control period in a given year must be a TR SO<sub>2</sub> Group 1 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each TR SO<sub>2</sub> Group 1 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart CCCCC.

(6) Limited authorization. A TR SO<sub>2</sub> Group 1 allowance is a limited authorization to emit one ton of SO<sub>2</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:

(i). Such authorization shall only be used in accordance with the TR SO<sub>2</sub> Group 1 Trading Program; and

(ii). Notwithstanding any other provision of 40 CFR part 97, subpart CCCCC, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A TR SO<sub>2</sub> Group 1 allowance does not constitute a property right.

**(d) Title V permit revision requirements.**

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR SO<sub>2</sub> Group 1 allowances in accordance with 40 CFR part 97, subpart CCCCC.

(2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.630 through 97.635, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR part 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E), Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.606(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

**(e) Additional recordkeeping and reporting requirements.**

(1) Unless otherwise provided, the owners and operators of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall keep on site at the source each of the following



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documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator. (i). The certificate of representation under 40 CFR 97.616 for the designated representative for the source and each TR SO2 Group 1 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.616 changing the designated representative.

(ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart CCCCC.

(iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR SO2 Group 1 Trading Program.

(2) The designated representative of a TR SO2 Group 1 source and each TR SO2 Group 1 unit at the source shall make all submissions required under the TR SO2 Group 1 Trading Program, except as provided in 40 CFR 97.618. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

(1) Any provision of the TR SO2 Group 1 Trading Program that applies to a TR SO2 Group 1 source or the designated representative of a TR SO2 Group 1 source shall also apply to the owners and operators of such source and of the TR SO2 Group 1 units at the source.

(2) Any provision of the TR SO2 Group 1 Trading Program that applies to a TR SO2 Group 1 unit or the designated representative of a TR SO2 Group 1 unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR SO2 Group 1 Trading Program or exemption under 40 CFR 97.605 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR SO2 Group 1 source or TR SO2 Group 1 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

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**Methods used to demonstrate compliance:**

**Monitoring Reference: 40 CFR 97 Subpart CCCCC-TR Describe:**

The Permittee shall comply with the monitoring requirements found in §97.606, §97.630, §97.631, §97.632, and §97.633.

The Permittee operates continuous emission monitoring system (CEMS) pursuant to 40 CFR Part 75, Subpart B (for SO<sub>2</sub> monitoring) and 40 CFR Part 75, Subpart H (for NO<sub>x</sub> monitoring).

**Testing Reference: None Describe:**

See Monitoring Requirements

**Record Keeping Reference: 40 CFR 97 Subpart CCCCC-TR Describe:**

The Permittee shall comply with the recordkeeping requirements found in §97.606, §97.630, and §97.634.

**Reporting Reference: 40 CFR 97 Subpart CCCCC-TR Describe:**

The Permittee shall comply with the reporting requirements found in §97.606, §97.630, §97.633 and §97.634.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-HAW-Unit 1, FSC-HAW-Unit2, and FSC-HAW-Unit 4

General Reference: SO<sub>2</sub> Consent Agreement dated December 4, 2019

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

- 5. Beginning January 1, 2021, at all times when operating, Unit W1 at the H.A. Wagner generating station shall not exceed an SO<sub>2</sub> emissions limit of 480 pounds per hour, as measured on a one-hour average.
- 6. Beginning January 1, 2021, at all times when operating, Unit W1 at the H.A. Wagner generating station shall not exceed 438 hours of operation per calendar year when burning fuel oil.
- 7. No later than July 1, 2020, Unit W2 at the H.A. Wagner generating station shall permanently cease burning coal and shall only burn natural gas.
- 11. Beginning January 1, 2021, at all times when operating, Unit W4 at the H.A. Wagner generating station shall not exceed an SO<sub>2</sub> emissions limit of 1,350 pounds per hour, as measured on a one-hour average.
- 12. Beginning January 1, 2021, at all times when operating, Unit W4 at the H.A. Wagner generating station shall not exceed 438 hours of operation per calendar year when burning fuel oil.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference:** Consent Agreement dated December 4, 2019 Describe:

14. For the purposes of Paragraphs 1-12, which require the calculation of emissions rates, an emissions rate shall be calculated as the sum of the SO<sub>2</sub> hourly emissions (lbs) of all the applicable units during the applicable period, divided by the sum of the operating hours during the applicable period. "Operating hour" is defined as any hour or portion of an hour that a unit combusts fossil fuel.

**Testing Reference:** Consent Agreement dated December 4, 2019 Describe:

See Reporting requirements

**Record Keeping Reference: Consent Agreement dated December 4, 2019 Describe:**

See Reporting requirements

**Reporting Reference: Consent Agreement dated December 4, 2019 Describe:**

13. Raven Power will demonstrate compliance with the limitations of Paragraphs 1 through 12 through quarterly reports utilizing calculation methodologies, continuous emissions monitoring system (CEMS) availability requirements, and a report format approved by the Department. Raven Power shall submit the proposed methodologies, CEMS availability requirements, and report format within 6 months of the effective date of this consent order for approval by the Department. Raven Power shall submit each quarterly report within 30 days of the end of the applicable quarter.

15. Raven Power shall comply with the following contingency measures, which are a required component of the nonattainment SIP revision pursuant to Section 172(c)(9) of the Clean Air Act.

16. At any time that emissions from BS1, BS2, and/or W3 at the Fort Smallwood Complex exceed one or more of the SO<sub>2</sub> emissions limits or fuel oil operations limits identified in Paragraphs 1 through 12 of this Consent Order, Raven Power shall, with 48 hours of such exceedance, undertake a full-system audit of Units BS1, BS2, W1, W2, W3, and W4 (cumulatively) at the Fort Smallwood Complex and shall submit a telephone report on the next business day and a written report to the Department within 10 days of the exceedance. At any time that emissions from Units W1, W2, and/or W4 at the Fort Smallwood Complex exceed one or more of the SO<sub>2</sub> emissions limits or fuel oil operations limits identified in Paragraphs 1 through 12 of this Consent Order, Raven Power shall, within 48 hours of knowledge of fuel test results, undertake a full-system audit of Units BS1, BS2, W1, W2, W3, and W4 (cumulatively) at the Fort Smallwood Complex and shall submit a telephone report on the next business day and a written report to the Department within 10 days of the exceedance. The telephone report shall be submitted pursuant to COMAR 26.11.01.07C. A written report to satisfy this requirement shall include both (1) the results of the full-system audit, and (2) a report of excess emissions prepared pursuant to COMAR 26.11.01.07D and Section 3.4 of the Operating Permit. The full-system audit shall consist of a review of the parameters routinely monitored by the continuous emissions monitoring systems and the digital data acquisition systems installed on the SO<sub>2</sub> generating units and their control devices and programs to determine whether or not the units and their controls were operating in accordance with good engineering practices.

a. If the units or their controls were not operating in accordance with good engineering practices, then Raven Power shall implement corrective actions to ensure that the limits of this Consent Order are not exceeded.

b. If the units and controls were operating in accordance with good engineering practice, then Raven Power shall inform the Department as to the reasons for their exceedance of one or more of their SO<sub>2</sub> emissions limits and implement corrective actions to ensure that the limits of this Consent Order are not exceeded.

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c. In any case of an exceedance of an SO<sub>2</sub> emission limit or of a fuel oil operations limit, Raven Power shall document and notify the Department of the corrective actions that they have taken.

d. The audit, report of excess emissions, documentation of corrective actions taken, and associated records shall be maintained on site for five years.

17. If the Essex, Maryland monitor (AIRS ID 24-005-3001) or any other Department-approved air quality SO<sub>2</sub> monitor located within the SO<sub>2</sub> Nonattainment Area, measures a 1-hour SO<sub>2</sub> concentration exceeding 75 parts per billion (i.e. an exceedance of the 1-hour SO<sub>2</sub> NAAQS), then the Department will notify Raven Power within 5 business days both verbally and in writing. If, however, Raven Power first notifies the Department both verbally and in writing of the monitored exceedance, then the Department will not also notify Raven Power. In either case, whether it is the Department or Raven Power who first notifies the other party of the monitor's exceedance of the 75 parts per billion SO<sub>2</sub> limit, within 2 business days of that first notification, Raven Power shall notify the Department whether Units BS 1, BS2, W1, W2, W3, and W4 were running at the time of the exceedance or within 24 hours preceding the exceedance. If any of those Units were running during that timeframe, Raven Power shall analyze the meteorological data on the day the 1-hour exceedance occurred to determine the extent the Fort Smallwood SO<sub>2</sub> emissions contributed to the 1-hour exceedance. The meteorological data analysis shall include: (1) trajectories run at three different heights (one at stack height; and two more within the boundary layer) by the National Oceanic and Atmospheric Administration's Hysplit program or an equivalent program; and (2) an analysis of meteorological data including the Baltimore- Washington International Airport's meteorological data and modeled upper air data using the National Weather Service's Bufkit or an equivalent program. Raven Power shall submit its meteorological data analysis, and its findings there from, to the Department within 30 days of written notification of the exceedance of the 1-hour SO<sub>2</sub> NAAQS.

**Frequency of submittal of the compliance demonstration: Quarterly**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-HAW-Unit 1, FSC-HAW-Unit 2, and FSC-HAW-Unit 4  
General Reference: 40 CFR Part 72 and Part 75

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D2. Acid Rain Provisions

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

**Methods used to demonstrate compliance:**

**Monitoring: Reference: §75.10(a)(1) and Acid Rain Permit Describe:**

The Permittee shall install, certify, operate, and maintain a NOx emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B- Monitoring Provisions.

**Testing Reference: 40 CFR Part 75, Appendix A and COMAR 26.11.03.06C Describe:**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A.

**Record Keeping Reference: Acid Rain Permit Describe:**

The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75.

**Reporting Reference: Acid Rain Permit Describe:**

The Permittee shall also comply with the reporting requirements of the renewal Acid Rain Permit.

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Frequency of submittal of the compliance demonstration: **Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-HAW-Unit 1, FSC-HAW-Unit 2, and FSC-HAW-Unit 4**  
**General Reference: 40 CFR Part 97 Subpart AAAAA-TR**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D3 - 40 CFR Part 97 Subpart AAAAA-TR NOX Annual Trading Program  
TR NOX Annual Trading Program requirements (40 CFR 97.406)

**(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.413 through 97.418.

**(b) Emissions monitoring, reporting, and recordkeeping requirements.**

(1) The owners and operators, and the designated representative, of each TR NOX Annual source and each TR NOX Annual unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.430 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.431 (initial monitoring system certification and recertification procedures), 97.432 (monitoring system out-of-control periods), 97.433 (notifications concerning monitoring), 97.434 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.435 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

(2) The emissions data determined in accordance with 40 CFR 97.430 through 97.435 shall be used to calculate allocations of TR NOX Annual allowances under 40 CFR 97.411(a)(2) and (b) and 97.412 and to determine compliance with the TR NOX Annual emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.430 through 97.435 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

**(c) NOX emissions requirements.**

(1) TR NOX Annual emissions limitation.

(i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NOX Annual source and each TR NOX Annual unit at the source shall hold, in the source's compliance account, TR NOX Annual allowances available for deduction for such control period under 40 CFR 97.424(a) in an amount not less than the tons of total NOX emissions for such control period from all TR NOX Annual units at the source.

(ii). If total NOX emissions during a control period in a given year from the TR NOX Annual units at a TR NOX Annual source are in excess of the TR NOX Annual emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A). The owners and operators of the source and each TR NOX Annual unit at the source shall hold the TR NOX Annual allowances required for deduction under 40 CFR 97.424(d); and



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(B). The owners and operators of the source and each TR NOX Annual unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.

(2) TR NOX Annual assurance provisions.

(i). If total NOX emissions during a control period in a given year from all TR NOX Annual units at TR NOX Annual sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NOX emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR NOX Annual allowances available for deduction for such control period under 40 CFR 97.425(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.425(b), of multiplying— (A) The quotient of the amount by which the common designated representative's share of such NOX emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NOX emissions exceeds the respective common designated representative's assurance level; and (B) The amount by which total NOX emissions from all TR NOX Annual units at TR NOX Annual sources in the state for such control period exceed the state assurance level. (ii). The owners and operators shall hold the TR NOX Annual allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(iii). Total NOX emissions from all TR NOX Annual units at TR NOX Annual sources in the State during a control period in a given year exceed the state assurance level if such total NOX emissions exceed the sum, for such control period, of the state NOX Annual trading budget under 40 CFR 97.410(a) and the state's variability limit under 40 CFR 97.410(b).

(iv). It shall not be a violation of 40 CFR part 97, subpart AAAAA or of the Clean Air Act if total NOX emissions from all TR NOX Annual units at TR NOX Annual sources in the State during a control period exceed the state assurance level or if a common designated representative's share of total NOX emissions from the TR NOX Annual units at TR NOX Annual sources in the state during a control period exceeds the common designated representative's assurance level.

(v). To the extent the owners and operators fail to hold TR NOX Annual allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

(A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B). Each TR NOX Annual allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.

(3) Compliance periods.

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(i). A TR NOX Annual unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015, or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.

(ii). A TR NOX Annual unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance. (i). A TR NOX Annual allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR NOX Annual allowance that was allocated for such control period or a control period in a prior year.

(ii). A TR NOX Annual allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through

(iii) above for a control period in a given year must be a TR NOX Annual allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each TR NOX Annual allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart AAAAA.

(6) Limited authorization. A TR NOX Annual allowance is a limited authorization to emit one ton of NOX during the control period in one year. Such authorization is limited in its use and duration as follows:

(i). Such authorization shall only be used in accordance with the TR NOX Annual Trading Program; and

(ii). Notwithstanding any other provision of 40 CFR part 97, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A TR NOX Annual allowance does not constitute a property right.

**(d) Title V permit revision requirements.**

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR NOX Annual allowances in accordance with 40 CFR part 97, subpart AAAAA.

(2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.430 through 97.435, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.406(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

(e) Additional recordkeeping and reporting requirements.

(1) Unless otherwise provided, the owners and operators of each TR NOX Annual source and each TR NOX Annual unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

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(i). The certificate of representation under 40 CFR 97.416 for the designated representative for the source and each TR NOX Annual unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.416 changing the designated representative.

(ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart AAAAA.

(iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR NOX Annual Trading Program.

(2) The designated representative of a TR NOX Annual source and each TR NOX Annual unit at the source shall make all submissions required under the TR NOX Annual Trading Program, except as provided in 40 CFR 97.418. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

(1) Any provision of the TR NOX Annual Trading Program that applies to a TR NOX Annual source or the designated representative of a TR NOX Annual source shall also apply to the owners and operators of such source and of the TR NOX Annual units at the source.

(2) Any provision of the TR NOX Annual Trading Program that applies to a TR NOX Annual unit or the designated representative of a TR NOX Annual unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR NOX Annual Trading Program or exemption under 40 CFR 97.405 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR NOX Annual source or TR NOX Annual unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR Part 97 Subpart AAAAA-TR and Describe:**

The Permittee shall comply with the monitoring requirements found in §97.406, §97.430, and §97.434 for the NOX Annual Trading Program.

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**Testing Reference: 40 CFR Part 97 Subpart AAAAA-TR Describe:**

See Monitoring Requirements

**Record Keeping Reference: 40 CFR Part 97 Subpart AAAAA-TR Describe:**

The Permittee shall comply with the recordkeeping requirements found in §97.406, §97.430, and §97.434 for the NOX Annual Trading Program.

**Reporting Reference: 40 CFR Part 97 Subpart AAAAA-TR Describe:**

The Permittee shall comply with the reporting requirements found in §97.406, §97.430, §97.433 and §97.434 for the NOX Annual Trading Program.

**Frequency of submittal of the compliance demonstration: Quarterly**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-HAW-Unit 1, FSC-HAW-Unit 2, and FSC-HAW-Unit 4**  
**General Reference: 40 CFR Part 97 Subpart BBBB-TR**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D3 - TR NOX Ozone Season Trading Program Requirements (40 CFR 97.506)

**(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.513 through 97.518.

**(b) Emissions monitoring, reporting, and recordkeeping requirements.**

(1) The owners and operators, and the designated representative, of each TR NOX Ozone Season source and each TR NOX Ozone Season unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.530 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.531 (initial monitoring system certification and recertification procedures), 97.532 (monitoring system out-of-control periods), 97.533 (notifications concerning monitoring), 97.534 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.535 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

(2) The emissions data determined in accordance with 40 CFR 97.530 through 97.535 shall be used to calculate allocations of TR NOX Ozone Season allowances under 40 CFR 97.511(a)(2) and (b) and 97.512 and to determine compliance with the TR NOX Ozone Season emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and

determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.530 through 97.535 and rounded to the nearest ton, with any

fraction of a ton less than 0.50 being deemed to be zero.

**(c) NOX emissions requirements.**

(1) TR NOX Ozone Season emissions limitation.

(i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NOX Ozone Season source and each TR NOX Ozone Season unit at the source shall hold, in the source's compliance account, TR NOX Ozone Season allowances available for deduction for

such control period under 40 CFR 97.524(a) in an amount not less than the tons of total NOX emissions for such control period from all TR NOX Ozone Season units at the source.

(ii). If total NOX emissions during a control period in a given year from the TR NOX Ozone Season units at a TR NOX Ozone Season source are in excess of the TR NOX Ozone Season emissions limitation set forth in paragraph (c)(1)(i) above, then:

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(A). The owners and operators of the source and each TR NOX Ozone Season unit at the source shall hold the TR NOX Ozone Season allowances required for deduction under 40 CFR 97.524(d); and

(B). The owners and operators of the source and each TR NOX Ozone Season unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart BBBBB and the Clean Air Act.

(2) TR NOX Ozone Season assurance provisions.

(i). If total NOX emissions during a control period in a given year from all TR NOX Ozone Season units at TR NOX Ozone Season sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NOX emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR NOX Ozone Season allowances available for deduction for such control period under 40 CFR 97.525(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator (A). The quotient of the amount by which the common designated representative's share of such NOX

emissions exceeds the common designated representative's assurance level divided by the sum of

the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NOX

emissions exceeds the respective common designated representative's assurance level; and

(B). The amount by which total NOX emissions from all TR NOX Ozone Season units at TR NOX Ozone Season sources in the state for such control period exceed the state assurance level.

(ii). The owners and operators shall hold the TR NOX Ozone Season allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(iii). Total NOX emissions from all TR NOX Ozone Season units at TR NOX Ozone Season sources in the state during a control period in a given year exceed the state assurance level if such total NOX emissions exceed the sum, for such control period, of the State NOX Ozone Season trading budget under 40 CFR 97.510(a) and the state's variability limit under 40 CFR 97.510(b).

(iv). It shall not be a violation of 40 CFR part 97, subpart BBBBB or of the Clean Air Act if total NOX emissions from all TR NOX Ozone Season units at TR NOX Ozone Season sources in the state during a control period exceed the state assurance level or if a common designated representative's share of

total NOX emissions from the TR NOX Ozone Season units at TR NOX Ozone Season sources in the state during a control period exceeds the common designated representative's assurance level.

(v). To the extent the owners and operators fail to hold TR NOX Ozone Season allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

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(A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and (B). Each TR NOX Ozone Season allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart BBBBB and the Clean Air Act.

(3) Compliance periods.

(i). A TR NOX Ozone Season unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of May 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.530(b) and for each control period thereafter.

(ii). A TR NOX Ozone Season unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.530(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance.

(i). A TR NOX Ozone Season allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR NOX Ozone Season allowance that was allocated for such control period or a control period in a prior year.

(ii). A TR NOX Ozone Season allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a TR NOX Ozone Season allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each TR NOX Ozone Season allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart BBBBB.

(6) Limited authorization. A TR NOX Ozone Season allowance is a limited authorization to emit one ton of NOX during the control period in one year. Such authorization is limited in its use and duration as follows:

(i). Such authorization shall only be used in accordance with the TR NOX Ozone Season Trading Program; and

(ii). Notwithstanding any other provision of 40 CFR part 97, subpart BBBBB, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A TR NOX Ozone Season allowance does not constitute a property right.

**(d) Title V permit revision requirements.**

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR NOX Ozone Season allowances in accordance with 40 CFR part 97, subpart BBBBB.

(2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.530 through 97.535, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V

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permit using minor permit modification procedures in accordance with 40 CFR 97.506(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

**(e) Additional recordkeeping and reporting requirements.**

(1) Unless otherwise provided, the owners and operators of each TR NOX Ozone Season source and each TR NOX Ozone Season unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i). The certificate of representation under 40 CFR 97.516 for the designated representative for the source and each TR NOX Ozone Season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.516 changing the designated representative.

(ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart BBBBB.

(iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR NOX Ozone Season Trading Program.

(2) The designated representative of a TR NOX Ozone Season source and each TR NOX Ozone Season unit at the source shall make all submissions required under the TR NOX Ozone Season Trading Program, except as provided in 40 CFR 97.518. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

(1) Any provision of the TR NOX Ozone Season Trading Program that applies to a TR NOX Ozone Season source or the designated representative of a TR NOX Ozone Season source shall also apply to the owners and operators of such source and of the TR NOX Ozone Season units at the source.

(2) Any provision of the TR NOX Ozone Season Trading Program that applies to a TR NOX Ozone Season unit or the designated representative of a TR NOX Ozone Season unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR NOX Ozone Season Trading Program or exemption under 40 CFR 97.505 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR NOX Ozone Season source or TR NOX Ozone Season unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

Quarterly Monitoring Report:     x    

Annual Compliance Certification:     x



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Semi-Annual Monitoring Report:   x  

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR Part 97 Subpart BBBBB-TR Describe:**

The Permittee shall comply with the monitoring requirements found in §97.506, §97.530, and §97.534 for the NOX Ozone Season Trading Program.

**Testing Reference: 40 CFR Part 97 Subpart BBBBB-TR Describe:**

See Monitoring Requirements

**Record Keeping Reference: 40 CFR Part 97 Subpart BBBBB-TR Describe:**

The Permittee shall comply with the recordkeeping requirements found in §97.506, §97.530, and §97.534 for the NOX Ozone Season Trading Program.

**Reporting Reference: 40 CFR Part 97 Subpart BBBBB-TR Describe:**

The Permittee shall comply with the reporting requirements found in §97.506, §97.530, §97.533, and §97.534 for the NOX Ozone Season Trading Program.

**Frequency of submittal of the compliance demonstration: Quarterly**

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**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No. FSC-HAW-Unit 2**

**General Reference: 40 CFR 63 Subpart DDDDD**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

§63.7485 - Am I subject to this subpart?

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of HAP, except as specified in §63.7491. For purposes of this subpart, a major source of HAP is as defined in §63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in §63.7575.

§63.7495 - When do I have to comply with this subpart?

“(d) You must meet the notification requirements in §63.7545 according to the schedule in §63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.”

(f) If you own or operate an existing EGU that becomes subject to this subpart after January 31, 2016, you must be in compliance with the applicable existing source provisions of this subpart on the effective date such unit becomes subject to this subpart.”

§63.7500 - What emission limitations, work practice standards, and operating limits must I meet?

“(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.”

“(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in § 63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.”

Note that Raven Power is requesting a federally-enforceable limit of 10% or less annual capacity factor of FSC-HAW-Unit 2 to meet the definition of a limited-use boiler in 40 CFR 63.7575.

**Permit Shield Request: Yes**

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: \_\_\_\_\_

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- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR 63.7530 Describe:**

Control of HAPs Emissions

§63.7530 - How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?

“(e) You must include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 to this subpart, and that the assessment is an accurate depiction of your facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.

(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.7545(e).

(g) If you elect to demonstrate that a gaseous fuel meets the specifications of another gas 1 fuel as defined in §63.7575, you must conduct an initial fuel specification analyses according to §63.7521(f) through (i) and according to the frequency listed in §63.7540(c) and maintain records of the results of the testing as outlined in §63.7555(g). For samples where the initial mercury specification has not been exceeded, you will include a signed certification with the Notification of Compliance Status that the initial fuel specification test meets the gas specification outlined in the definition of other gas 1 fuels.”

Continuous Compliance Requirements

§63.7540 - How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

“(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 13 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.”

“(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to limited-use boilers and process heaters, as defined in §63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the

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- previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;
- (ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
  - (iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;
  - (iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject;
  - (v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and
  - (vi) Maintain on-site and submit, if requested by the Administrator, report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,
    - (A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
    - (B) A description of any corrective actions taken as a part of the tune-up;
    - and
    - (C) The type and amount of fuel used over the 12 months prior to the tune up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit."
- (12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in §63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.
- (13) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.
- (b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 13 to this subpart that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in this subpart. These deviations must be reported according to the requirements in §63.7550."

**Testing Reference: 40 CFR 63.7510, 40 CFR 63.7515 Describe:**

Control of HAPs Emissions

§63.7510 - What are my initial compliance requirements and by what date must I conduct them?

“(e) For existing affected sources (as defined in §63.7490), you must complete the initial compliance demonstrations, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the compliance date that is specified for your source in §63.7495 and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in §63.7540(a)(10)(i) through (vi) no later than the compliance date specified in §63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in §63.7495.”

“(i) For an existing EGU that becomes subject after January 31, 2016, you must demonstrate compliance within 180 days after becoming an affected source.”

§63.7515 - When must I conduct subsequent performance tests, fuel analyses, or tune-ups?

“(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to §63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in §63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in §63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in §63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in §63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after the initial startup of the new or reconstructed affected source.”

**Record Keeping Reference: 40 CFR 63.7555, 40 CFR 63.7560 Describe:**

Note: All records must be maintained for a period of 5 years.

§63.7555 - What records must I keep?

“(a) You must keep records according to paragraphs (a)(1) and (2) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in §63.10(b)(2)(viii).

(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.”

“(h) If you operate a unit in the unit designed to burn gas 1 subcategory that is subject to this subpart, and you use an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under this part, other gas 1 fuel, or gaseous fuel subject to another

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subpart of this part or part 60, 61, or 65, you must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.”

§63.7560 - In what form and how long must I keep my records?

“(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years.”

**Reporting Reference: 40 CFR 63.7550, 40 CFR 63.7545 and Table 9 of 40 CFR 63, Subpart DDDDD Describe:**

§63.7545 - What notifications must I submit and when?

“(a) You must submit to the Administrator all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

(e) If you are required to conduct an initial compliance demonstration as specified in §63.7530, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8), as applicable. If you are not required to conduct an initial compliance demonstration as specified in §63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) and must be submitted within 60 days of the compliance date specified at §63.7495(b).

(f) If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to this subpart, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in §63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in §63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.

(4) Type of alternative fuel that you intend to use.

(5) Dates when the alternative fuel use is expected to begin and end.

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(h) If you have switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:

- (1) The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.
- (2) The currently applicable subcategory under this subpart.
- (3) The date upon which the fuel switch or physical change occurred.”

§63.7550 - What reports must I submit and when?

“(a) You must submit each report in Table 9 to this subpart that applies to you.

<b>You Must Submit a(n)</b>	<b>The report must contain</b>	<b>You must submit the report</b>
Compliance Report	Information required in §63.7550(c)(1) through (5); and	Semiannually, annually, biennially, or every 5 years according to the requirements in §63.7550(b).

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct an annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in §63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in §63.7495.

(2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in §63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.

(4) Each subsequent compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting



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period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to the requirements of a tune up they must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of this section, (xiv) and (xvii) of this section, and paragraph (c) (5)(iv) of this section for limited-use boiler or process heater.

“(5)(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) The total operating time during the reporting period.”

(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

(xvii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.”

“(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.”

“(3) You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA’s CDX). You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.”

**Frequency of submittal of the compliance demonstration: Semi-Annual**



**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-HAW-Unit 3**

**General Reference: NO<sub>x</sub> RACT Averaging Plan Consent Order-February 18, 2016**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D. Control of NO<sub>x</sub> Emissions

D1 - NO<sub>x</sub> RACT requirements

Table 1 – Summary of NOX RACT Averaging Plan Limits (2016)

Table 1 – Summary of NO <sub>x</sub> RACT Averaging Plan Limits (2016)		
Facility	Unit	RACT Limit lb/MMBtu
Brandon Shores	1	0.5
	2	0.5
H.A. Wagner	1	0.3
	2	0.3
	3	0.5
	4	0.3

Individual unit compliance with NOX RACT requirements will be determined daily on a 30-day rolling average basis. Annual compliance will also be demonstrated by showing that annual mass emissions from the units in the averaging plan are less than 80% of the mass emissions that would have been allowed on an individual basis.

The following methodology will be used to calculate 30-day rolling emissions and determine compliance:

(1) Calculate daily system and NOX RACT emission rates:

$$ER_{System} = \Sigma (ER_i * (H_{li} / H_{ITotal}))$$

$$ERRACT = \Sigma (ERRACT_{,i} * (H_{li} / H_{ITotal}))$$

where:

ER<sub>System</sub> = System average emission rate, lb/MMBtu

ERRACT = System average NOX RACT limit, lb/MMBtu

ER<sub>i</sub> = Daily emission rate for unit i, lb/MMBtu

ERRACT<sub>,i</sub> = Daily NOX RACT limit for unit i, lb/MMBtu

H<sub>li</sub> = Daily heat input for unit i, MMBtu

$HITotal = \text{Daily heat for all of the units} = \sum H_{li}, \text{ MMBtu}$

(2) After 30 days, calculate 30-day rolling emission rate for the system and the NOX RACT:

$ER30 \text{ Day System} = (\sum (ER_{System})) / 30$

$ER30 \text{ Day RACT} = (\sum (ERRACT)) / 30$

where:

$ER30 \text{ Day System} = 30\text{-day rolling system average emission rate, MMBtu/lb}$

$ER30 \text{ Day RACT} = 30\text{-day rolling system average emission rate, MMBtu/lb}$

(3) Calculate mass emissions on a daily basis:

$NOX \ 30 \text{ Day System} = ER30 \text{ Day System} * HITotal / 2000$

$NOX \ RACT = ER30 \text{ Day RACT} * HITotal / 2000$

where:

$NOX \ 30 \text{ Day System} = NOX \text{ mass emissions based on a 30-day rolling system average emission rate, tons}$

$NOX \ RACT = NOX \text{ mass emissions based on a 30-day rolling RACT limit, tons}$

(4) Determine compliance with NOX RACT:

$NOX \ System < NOX \ RACT$

In addition on a yearly basis Raven Power will certify that the NOX mass emissions for the six units included in the averaging plan did not exceed 80% of the emissions allowable under the NOX RACT limits.

$NOX \ Annual \ System < 0.80 * NOXRACT \ Total$

where:

$NOX \ Annual \ System = \text{Annual NOX mass emissions for the units in the averaging plan}$

$NOX \ RACT \ Total = \text{Allowable NOX mass emissions based on the}$

$NOX \ RACT \ limits$

**Permit Shield Request: Yes**

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference: COMAR 26.11.09.08C(3), COMAR 26.11.09.08B(2)(b), Consent Agreement dated February 18, 2016 Describe:**

All the units included in the Averaging Plan have continuous emissions monitors (CEM) for monitoring NOX emissions. These units follow the operations, maintenance, recordkeeping, and reporting requirements contained in 40 CFR Part 75.

The Permittee shall operate, calibrate, and maintain a certified NO<sub>x</sub> CEM or an alternative NO<sub>x</sub> monitoring method approved by the Department and the EPA on each installation.

The Permittee certify CEMs in accordance with Part 75, Appendix A.

**Testing Reference: 40 CFR Part 75 Describe:**

See monitoring requirements

**Record Keeping Reference: COMAR 26.11.01.11A(2), COMAR 26.11.01.11E Describe:**

The Permittee shall maintain at each of the Generating Units records and information adequate to verify the calculations used to demonstrate compliance with the Averaging Plan's requirements, and shall make these records and information available to the Department upon request. The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E.

**Reporting Reference: COMAR 26.11.01.11E(2) and COMAR 26.11.09.08K(1), Consent Agreement dated February 18, 2016 Describe:**

Quarterly reports will be submitted within 30 days of the end of each reporting quarter summarizing compliance with the Averaging Plan.

The Permittee shall submit quarterly emission reports of CEM data to the Department on or before the thirtieth day of the month following the end of each calendar quarter."

The Permittee shall comply with the reporting requirements of COMAR 26.11.01.11E. (Record Keeping and Reporting Requirements).

**Frequency of submittal of the compliance demonstration: Quarterly**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-HAW-Unit 3

General Reference: 40 CFR 63 Part 63, Subpart UUUUU, Table 2, Table 4

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

Filterable PM - 0.03 lb/MMBtu

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference:** 40 CFR 63.10021 and 40 CFR 63 Subpart UUUUU Table 1 and Table 2

**Describe:**

Demonstrating compliance using Quarterly PM performance testing

(d) If you use quarterly performance testing to demonstrate compliance with one or more applicable emissions limits in Table 1 or 2 to this subpart, you

(1) May skip performance testing in those quarters during which less than 168 boiler operating hours occur, except that a performance test must be conducted at least once every calendar year.

(2) Must conduct the performance test as defined in Table 5 to this subpart and calculate the results of the testing in units of the applicable emissions standard; and

(3) Must conduct site-specific monitoring using CMS to demonstrate compliance with the site-specific monitoring requirements in Table 7 to this subpart pertaining to HCl and HF emissions from a liquid oil-fired EGU to ensure compliance with the HCl and HF emission limits in Tables 1 and 2 to this subpart, in accordance with the requirements of §63.10000(c)(2)(iii). The monitoring must meet the general operating requirements provided in §63.10020.

**Testing Reference:** 40 CFR 63 Subpart UUUUU Table 5 Describe:

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Section 1, Quarterly Emissions Testing for Filterable Particulate Matter (PM)

**Record Keeping Reference: 40 CFR 63 Subpart UUUUU Table 7 Describe:**

Section 4, Quarterly performance testing for coal-fired EGUs to measure compliance with PM applicable emissions limit in Table 2. Compliance is demonstrated by Calculating the results of the testing in units of the applicable emissions standard.

**Reporting Reference: 40 CFR 63.10031, 40 CFR 63 Subpart UUUUU Table 8 Describe:**

Compliance reports must contain the information required in § 63.10031(c)(1) through (9); and section B. and C. from Table 8.

**Frequency of submittal of the compliance demonstration: Quarterly**

MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-HAW-Unit 3

General Reference: 40 CFR 63 Part 63, Subpart UUUUU, Table 2

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

SO<sub>2</sub> - 0.20 lb/MMBtu (surrogate for acid gas HAP)

OR

HCl - 0.002 lb/MMBtu

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR 63.10021(b) Describe:**

Demonstrating compliance using HCl CEMS.

b) Except as otherwise provided in §63.10020(c), if you use a CEMS to measure SO<sub>2</sub>, PM, HCl, HF, or Hg emissions, or using a sorbent trap monitoring system to measure Hg emissions, you must demonstrate continuous compliance by using all quality-assured hourly data recorded by the CEMS (or sorbent trap monitoring system) and the other required monitoring systems (e.g., flow rate, CO<sub>2</sub>, O<sub>2</sub>, or moisture systems) to calculate the arithmetic average emissions rate in units of the standard on a continuous 30-boiler operating day (or, if alternate emissions averaging is used for Hg, 90-boiler operating day) rolling average basis, updated at the end of each new boiler operating day. Use Equation 8 to determine the 30- (or, if applicable, 90-) boiler operating day rolling average.

**Testing Reference: 40 CFR 63 Subpart UUUUU Table 5 Describe:**

Section 3, HCl CEMS using Appendix B of 40 CFR 63 Subpart UUUUU.

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**Record Keeping Reference: 40 CFR 63 Subpart UUUUU Table 7 Describe:**

Section 1, CEMS to measure HCl. Compliance is demonstrated by calculating the 30- (or 90-) boiler operating day rolling arithmetic average emissions rate in units of the applicable emissions standard basis at the end of each boiler operating day using all of the quality assured hourly average CEMS or sorbent trap data for the previous 30- (or 90-) boiler operating days, excluding data recorded during periods of startup or shutdown.

**Reporting Reference: 40 CFR 63.10031, 40 CFR 63 Subpart UUUUU Table 8 Describe:**

Compliance reports must contain the information required in § 63.10031(c)(1) through (9); and section B. and C. from Table 8.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-HAW-Unit 3

General Reference: 40 CFR 63 Part 63, Subpart UUUUU, Table 2

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

Hg - 1.2 lb/Tbtu

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR 63.10021(b) Describe:**

Demonstrating compliance using Hg CEMS.

b) Except as otherwise provided in §63.10020(c), if you use a CEMS to measure SO<sub>2</sub>, PM, HCl, HF, or Hg emissions, or using a sorbent trap monitoring system to measure Hg emissions, you must demonstrate continuous compliance by using all quality-assured hourly data recorded by the CEMS (or sorbent trap monitoring system) and the other required monitoring systems (e.g., flow rate, CO<sub>2</sub>, O<sub>2</sub>, or moisture systems) to calculate the arithmetic average emissions rate in units of the standard on a continuous 30-boiler operating day (or, if alternate emissions averaging is used for Hg, 90-boiler operating day) rolling average basis, updated at the end of each new boiler operating day. Use Equation 8 to determine the 30- (or, if applicable, 90-) boiler operating day rolling average.

**Testing Reference: 40 CFR 63.10010(a), (b), (c), and (d) and 40 CFR 63 Subpart UUUUU Table 5**

**Describe:**

Section 4, Hg CEMS using Appendix A of 40 CFR 63 Subpart UUUUU.

**Record Keeping Reference: 40 CFR 63 Subpart UUUUU Table 7 Describe:**



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Section 1, CEMS to measure Hg. Compliance is demonstrated by calculating the 30- (or 90-) boiler operating day rolling arithmetic average emissions rate in units of the applicable emissions standard basis at the end of each boiler operating day using all of the quality assured hourly average CEMS or sorbent trap data for the previous 30- (or 90-) boiler operating days, excluding data recorded during periods of startup or shutdown.

**Reporting Reference: 40 CFR 63.10031, 40 CFR 63 Subpart UUUUU Table 8 Describe:**

Compliance reports must contain the information required in § 63.10031(c)(1) through (9); and section B. and C. from Table 8.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-HAW-Unit 3

General Reference: 40 CFR Part 63, Subpart UUUUU Table 3

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

Conduct a tune-up of the EGU burner and combustion controls at least each 36 calendar months, or each 48 calendar months if neural network combustion optimization software is employed, as specified in § 63.10021(e).

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

**Monitoring Reference:** None Describe:

**Testing Reference:** 40 CFR 63.10021(e)(1)-(7) Describe:

If you must conduct periodic performance tune-ups of your EGU(s), as specified in paragraphs (e)(1) through (9) of this section, perform the first tune-up as part of your initial compliance demonstration. Notwithstanding this requirement, you may delay the first burner inspection until the next scheduled unit outage provided you meet the requirements of § 63.10005. Subsequently, you must perform an inspection of the burner at least once every 36 calendar months unless your EGU employs neural network combustion optimization during normal operations in which case you must perform an inspection of the burner and combustion controls at least once every 48 calendar months.

40 CFR 63.10021(e)(1)

As applicable, inspect the burner and combustion controls, and clean or replace any components of the burner or combustion controls as necessary upon initiation of the work practice program and at least once every required inspection period. Repair of a burner or combustion control component requiring special order parts may be scheduled as follows:

40 CFR 63.10021(e)(1)(i)

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Burner or combustion control component parts needing replacement that affect the ability to optimize NO<sub>x</sub> and CO must be installed within 3 calendar months after the burner inspection,

40 CFR 63.10021(e)(1)(ii)

Burner or combustion control component parts that do not affect the ability to optimize NO<sub>x</sub> and CO may be installed on a schedule determined by the operator;

40 CFR 63.10021(e)(2)

As applicable, inspect the flame pattern and make any adjustments to the burner or combustion controls necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available, or in accordance with best combustion engineering practice for that burner type;

40 CFR 63.10021(e)(3)

As applicable, observe the damper operations as a function of mill and/or cyclone loadings, cyclone and pulverizer coal feeder loadings, or other pulverizer and coal mill performance parameters, making adjustments and effecting repair to dampers, controls, mills, pulverizers, cyclones, and sensors;

40 CFR 63.10021(e)(4)

As applicable, evaluate windbox pressures and air proportions, making adjustments and effecting repair to dampers, actuators, controls, and sensors;

40 CFR 63.10021(e)(5)

Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly. Such inspection may include calibrating excess O<sub>2</sub> probes and/or sensors, adjusting overfire air systems, changing software parameters, and calibrating associated actuators and dampers to ensure that the systems are operated as designed. Any component out of calibration, in or near failure, or in a state that is likely to negate combustion optimization efforts prior to the next tune-up, should be corrected or repaired as necessary;

40 CFR 63.10021(e)(6)

Optimize combustion to minimize generation of CO and NO<sub>x</sub>. This optimization should be consistent with the manufacturer's specifications, if available, or best combustion engineering practice for the applicable burner type. NO<sub>x</sub> optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, adjusting combustion zone temperature profiles, and add-on controls such as SCR and SNCR; CO optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, and adjusting combustion zone temperature profiles;

40 CFR 63.10021(e)(7)

While operating at full load or the predominantly operated load, measure the concentration in the effluent stream of CO and NO<sub>x</sub> in ppm, by volume, and oxygen in volume percent,

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before and after the tune-up adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). You may use portable CO, NO<sub>x</sub> and O<sub>2</sub> monitors for this measurement. EGU's employing neural network optimization systems need only provide a single pre- and post-tune-up value rather than continual values before and after each optimization adjustment made by the system;

**Record Keeping Reference: 40 CFR 63.10021(e)(8), 40 CFR 63.10009(j), 40 CFR 63.10032, 40 CFR 63.10033 Describe:**

Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (e)(1) through (e)(9) of this section including:

40 CFR 63.10021(e)(8)(i)

The concentrations of CO and NO<sub>x</sub> in the effluent stream in ppm by volume, and oxygen in volume percent, measured before and after an adjustment of the EGU combustion systems;

40 CFR 63.10021(e)(8)(ii)

A description of any corrective actions taken as a part of the combustion adjustment; and

40 CFR 63.10021(e)(8)(iii)

The type(s) and amount(s) of fuel used over the 12 calendar months prior to an adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period

Compliance will also be demonstrated by meeting all applicable record keeping requirements under 40 CFR 63.10032 and 40 CFR 63.10033.

**Reporting Reference: 40 CFR 63.10021(e)(9), 40 CFR 63.10030, 40 CFR 63.10031 Describe:**

Report the dates of the initial and subsequent tune-ups as follows:

40 CFR 63.10021(e)(9)(i)

If the first required tune-up is performed as part of the initial compliance demonstration, report the date of the tune-up in hard copy (as specified in § 63.10030) and electronically (as specified in § 63.10031). Report the date of each subsequent tune-up electronically (as specified in § 63.10031).

40 CFR 63.10021(e)(9)(ii)

If the first tune-up is not conducted as part of the initial compliance demonstration, but is postponed until the next unit outage, report the date of that tune-up and all subsequent tune-ups electronically, in accordance with § 63.10031.

Compliance will be demonstrated by meeting all applicable reporting requirements under 40 CFR 63.10030 and 40 CFR 63.10031.

**Frequency of submittal of the compliance demonstration: Annual**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: -HAW-Unit 3

General Reference: 40 CFR Part 63, Subpart UUUUU Table 3

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

Raven Power Ft. Smallwood chooses to comply using paragraph (1) of the definition of startup in § 63.10042, meaning the facility must operate all CMS during startup. Startup means either the first-ever firing of fuel in a boiler for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on site use). For startup of a unit, you must use clean fuels, either natural gas or distillate oil or a combination of clean fuels for ignition. Once you convert to firing coal, residual oil, or solid oil-derived fuel, you must engage all of the applicable control technologies except dry scrubber and SCR. You must start your dry scrubber and SCR systems, if present, appropriately to comply with relevant standards applicable during normal operation. You must comply with all applicable emissions limits at all times except for periods that meet the definitions of startup and shutdown in this subpart. You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in § 63.10011(g) and § 63.10021(h) and (i).

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** None Describe:

**Testing Reference:** None Describe:

**Record Keeping Reference:** 40 CFR 63.10032, 40 CFR 63.10033 Describe:

Compliance will be demonstrated by meeting all applicable record keeping requirements under 40 CFR 63.10032 and 40 CFR 63.0033.

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**Reporting Reference: 40 CFR 63.10030, 40 CFR 63.10031 Describe:**

Compliance will be demonstrated by meeting all applicable reporting requirements under 40 CFR 63.10030 and 40 CFR 63.10031.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-HAW-Unit 3  
General Reference: 40 CFR 63.10009

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

All applicable requirements under 40 CFR 63.10009 will generally apply to the emission units, should Raven Power choose to utilize emissions averaging to meet the limitations, standards and operating limits of 40 CFR Part 63, Subpart UUUUU.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR 63.10022 Describe:**

40 CFR 63.10022(a)

Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of paragraphs (a)(1) through (3) of this section.

40 CFR 63.10022(a)(1)

For each 30- (or 90-) day rolling average period, demonstrate compliance with the average weighted emissions limit for the existing units participating in the emissions averaging option as determined in § 63.10009(f) and (g);

40 CFR 63.10022(a)(2)

For each existing unit participating in the emissions averaging option that is equipped with PM CPMS, maintain the average parameter value at or below the operating limit established during the most recent performance test;

40 CFR 63.10022(a)(3)

For each existing unit participating in the emissions averaging option venting to a common stack configuration containing affected units from other subcategories,

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maintain the appropriate operating limit for each unit as specified in Table 4 to this subpart that applies.

### 40 CFR 63.10022(b)

Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (3) of this section is a deviation.

### **Testing Reference: 40 CFR 63.10006(g) Describe:**

If you elect to demonstrate compliance using emissions averaging under § 63.10009, you must continue to conduct performance stack tests at the appropriate frequency given in section (c) through (f) of this section.

### **Record Keeping Reference: 40 CFR 63.10009(j), 40 CFR 63.10032, 40 CFR 63.10033 Describe:**

You must develop an implementation plan for emissions averaging according to the following procedures and requirements in paragraphs (j)(1) and (2) of this section.

#### 40 CFR 63.10009(j)(1)

You must include the information contained in paragraphs (j)(1)(i) through (v) of this section in your implementation plan for all the emissions units included in an emissions averaging:

#### 40 CFR 63.10009(j)(1)(i)

The identification of all existing EGUs in the emissions averaging group, including for each either the applicable HAP emission level or the control technology installed as of 180 days after February 16, 2015, or the date on which you complete the emissions measurements used to support your emissions averaging plan (if the Administrator does not require submission and approval of your emissions averaging plan), or the date that you begin emissions averaging, whichever is earlier; and the date on which you are requesting emissions averaging to commence;

#### 40 CFR 63.10009(j)(1)(ii)

The process weighting parameter (heat input, gross electrical output, or steam generated) that will be monitored for each averaging group;

#### 40 CFR 63.10009(j)(1)(iii)

The specific control technology or pollution prevention measure to be used for each emission EGU in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple EGUs, you must identify each EGU;

#### 40 CFR 63.10009(j)(1)(iv)

The means of measurement (*e.g.*, CEMS, sorbent trap monitoring, manual performance test) of filterable PM, SO<sub>2</sub>, HF, HCl, individual or total non-Hg HAP metals, or Hg emissions in accordance with the requirements in § 63.10007 and to be used in the emissions averaging calculations; and

#### 40 CFR 63.10009(j)(1)(v)



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A demonstration that emissions averaging can produce compliance with each of the applicable emission limit(s) in accordance with paragraph (b)(1) of this section.

40 CFR 63.10009(j)(2)

If the Administrator requests you to submit the plan for review and approval, you must submit a complete implementation plan at least 120 days before April 16, 2015. If the Administrator requests you to submit the plan for review and approval, you must receive approval before initiating emissions averaging.

40 CFR 63.10009(j)(2)(i)

The Administrator shall use following criteria in reviewing and approving or disapproving the plan:

40 CFR 63.10009(j)(2)(i)(A)

Whether the content of the plan includes all of the information specified in paragraph (j)(1) of this section; and

40 CFR 63.10009(j)(2)(i)(B)

Whether the plan presents information sufficient to determine that compliance will be achieved and maintained.

40 CFR 63.10009(j)(2)(ii)

The Administrator shall not approve an emissions averaging implementation plan containing any of the following provisions:

40 CFR 63.10009(j)(2)(ii)(A)

Any averaging between emissions of different pollutants or between units located at different facilities; or

40 CFR 63.10009(j)(2)(ii)(B)

The inclusion of any emissions unit other than an existing unit in the same subcategory.

Compliance will also be demonstrated by meeting all applicable record keeping requirements under 40 CFR 63.10032 and 40 CFR 63.10033.

**Reporting Reference: 40 CFR 63.10031 Describe:** Compliance will be demonstrated by meeting all applicable reporting requirements under 40 CFR 63.10031.

**Frequency of submittal of the compliance demonstration: Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-HAW-Unit 3  
General Reference: COMAR 26.11.09.05A(2)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

**A. Control of Visible Emissions**

**Fuel Burning Equipment.**

In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring: Reference: COMAR 26.11.01.10 Describe:**

The Permittee shall continuously monitor opacity of the stack gases using a continuous opacity monitor that is certified in accordance with 40 CFR Part 60, Appendix B and that meets the quality assurance criteria of COMAR 26.11.31.06.

**Testing Reference: None Describe:**

See Monitoring Requirements

**Record Keeping Reference: COMAR 26.11.01.10E Describe:**

All information required by this regulation to be maintained or reported to the Department shall be retained and made available for review by the Department for a minimum of 5 years from the time the report is submitted.

**Reporting Reference: COMAR 26.11.01.10D(1) & D(2) Describe:**

(1) System Downtime Reporting Requirements.

(a) All COM downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the first day on which downtime occurs.

(b) The COM downtime report shall include the reason, if known, for the breakdown and the estimated period of time that the COM will be down. The owner or operator shall notify the Department by telephone when the COM has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in 40 CFR Part 51 Appendix P, and is producing data.

(c) Except as otherwise approved by the Department and the EPA, a COM shall operate in compliance with the requirements of §B(2) of this regulation and collect data for at least 95 percent of the source's operating time during any calendar quarter. The alternative measurement plan required in §B(1)(b) of this regulation shall be used at all times when the COM fails to conform to performance standards required by §B(2) of this regulation during data collection.

(2) Data Reporting Requirements.

(a) A COM shall automatically reduce all data to six-minute block averages calculated from 24 or more equally spaced data points.

(b) All COM data shall be reported in a format approved by the Department.

(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:

(i) The cause, time periods, and the opacity of all emissions which exceed the applicable quarterly, daily and hourly emission standards as provided in COMAR 26.11.09.05A(4);

(ii) The COM and installation downtimes, including the time and date of the beginning and end of each downtime period, and whether the downtime was scheduled;

(iii) The cause of all COM downtime;

(iv) The total operating time for the quarter, and the total time and percent of the operating time during the quarter that excess emissions occurred, and the percentage of COM downtime, during the calendar quarter;

(v) Quarterly quality assurance activities;

(vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status;

(vii) Other information that the Department determines is necessary to evaluate the data or to ensure that compliance is achieved.

**Frequency of submittal of the compliance demonstration: Quarterly**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-HAW-Unit 3

**General Reference:** COMAR 26.11.09.06B(3), COMAR 26.11.09.06C

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

B. Control of Particulate Matter Emissions

B1 - Solid Fuel Burning Equipment.

A person may not cause or permit particulate matter caused by the combustion of solid fuel to be discharged into the atmosphere in excess of the amounts shown in Table 1. The maximum allowable emission of particulate matter is 0.03 gr/scfd @ 50% excess air.

Determination of Compliance (by stack test).

Compliance with the particulate matter emissions standards in this regulation shall be calculated as the average of 3 test runs using EPA Test Method 5 or other United States Environmental Protection Agency test method approved by the Department.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring: Reference: None Describe:**

See CAM Requirements in Title V Operating Permit.

**Testing Reference: COMAR 26.11.03.06C Describe:**

The Permittee, in accordance with COMAR 26.11.01.04A(1), shall conduct an annual stack test using EPA Method 5 of 40 CFR Part 60 Appendix A. The Permittee shall submit a test protocol/notification to the Department at least 30 days prior to the proposed test date and provide a 10 day notice to the Department prior to the scheduled test date.

**Record Keeping Reference: COMAR 26.11.06.03C, 26.11.02.02H, CPCN No. 9338, Condition B-IV-26, 32 Describe:**

The Permittee shall maintain records of the results of all particulate emission compliance tests.

For compliance stack tests required under Conditions B-IV-6 and B-IV-7 of CPCN No. 9338, Wagner shall maintain all records of stack test notifications, reports, and results for a period of at least five years.

**Reporting Reference: COMAR 26.11.06.03C, 26.11.02.02H, CPCN No. 9338, Condition B-IV-26, 32 Describe:**

The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to the proposed test date and provide a 10 days notice prior to the scheduled test date. The Permittee shall submit the stack test results to the Department in a final report within 60 days from the date of the test completion.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-HAW-Unit 3

**General Reference:** COMAR 26.11.09.07A(2), COMAR 26.11.02.02H, CPCN No. 9338,  
Condition B-IV-1

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C. Control of Sulfur Oxides

C1. Control of Sulfur Oxides from fuel burning equipment.

A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV:

(a) All solid fuels, 1.0 percent;

Fuel Type Limits: The only permissible fuels for Wagner Unit 3 is solid fossil fuels including bituminous coal, subbituminous coal, and a blend of bituminous and sub-bituminous coals, except that natural gas may be used during startups.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring: Reference: COMAR 26.11.03.06C & COMAR 26.11.01.11B(2) Describe:**

The Permittee shall obtain fuel supplier sulfur in fuel analyses or collect and analyze coal samples of coal received that demonstrate that the coal is in compliance with the 1.0 percent sulfur content in fuel limitation on an as burned basis.

“The owner or operator of fuel-burning equipment burning coal, with a heat input capacity of 100 million Btu per hour or greater, shall install CEMs to measure and record sulfur dioxide, nitrogen oxide, either oxygen or carbon dioxide, and flow.”

**Testing Reference: 40 CFR Part 75, Appendix A, COMAR 26.11.03.06C Describe:**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A.

**Record Keeping Reference: COMAR 26.11.06.03C & COMAR 26.11.01.11E(2) Describe:**

The Permittee shall retain, on site for at least five years, fuel supplier certifications stating that the coal is in compliance with the sulfur content in the fuel limitation or analyses of collected samples.

The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E.

**Reporting Reference: COMAR 26.11.06.03C and COMAR 26.11.01.11E(1)&(2) Describe:**

The Permittee shall submit coal supplier certifications or sulfur in fuel analyses to the Department upon request. The Permittee shall comply with the reporting requirements of COMAR 26.11.01.11E(1) and E (2)

(1) CEM System Downtime Reporting Requirements.

(a) All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the breakdown.

(b) The system breakdown report required by §E(1)(a) of this regulation shall include the reason, if known, for the breakdown and the estimated period of time that the CEM will be down. The owner or operator of the CEM shall notify the Department by telephone when an out-of-service CEM is back in operation and producing data that has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in COMAR 26.11.31, and is producing data.

(2) CEM Data Reporting Requirements.

(a) All test results shall be reported in a format approved by the Department.

(b) Certification testing shall be repeated when the Department determines that the CEM data may not meet performance specifications because of component replacement or other conditions that affect the quality of generated data.

(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:

(i) The cause, time periods, and magnitude of all emissions which exceed the applicable emission standards;

(ii) The source downtime including the time and date of the beginning and end of each downtime period and whether the source downtime was planned or unplanned;

(iii) The time periods and cause of all CEM downtime including records of any repairs, adjustments, or maintenance that may affect the ability of the CEM to meet performance specifications of emission data;

(iv) Quarterly totals of excess emissions, installation downtime, and CEM downtime during the calendar quarter;

(v) Quarterly quality assurance activities;

(vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status; and

(vii) Other information required by the Department that is determined to be necessary to evaluate the data, to ensure that compliance is achieved, or to determine the applicability of this regulation.

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(d) All information required by this regulation to be reported to the Department shall be retained and made available for review by the Department for a minimum of 2 years from the time the report is submitted.”

**Frequency of submittal of the compliance demonstration: Semi-Annual**



**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-HAW-Unit 3  
**General Reference:** COMAR 26.11.27.03C, E(1) – (3)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C. Control of Sulfur Oxides

C2 - Healthy Air Act  
 SO<sub>2</sub> Emission Limitations.

(1) Except as provided in §E of this regulation, annual SO<sub>2</sub> emissions from each affected electric generating unit may not exceed the number of tons in §C(2) of this regulation.

(2) Annual Tonnage Limitations.

Affected Unit	Annual SO <sub>2</sub> Tonnage Limitations Beginning
	January 1, 2013
H.A. Wagner Unit 3	2,490 tons

System-Wide Compliance Determinations.

(1) Compliance with the emission limitations in §§B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.

(2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§B and C of this regulation.

(3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:   x
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring: Reference:** COMAR 26.11.27.05A Describe:

Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.

**Testing Reference: 40 CFR Part 75, Appendix A, COMAR 26.11.03.06C Describe:**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A.

**Record Keeping Reference: COMAR 26.11.03.06C, COMAR 26.11.01.11E(2)(d) Describe:**

The Permittee shall maintain all records necessary to demonstrate compliance with the requirements of COMAR 26.11.27.

The Permittee shall maintain all information required to be reported or maintained under COMAR 26.11.01.11, on site for not less than five years, and shall make these records available to the Department upon request.

**Reporting Reference: Healthy Air Act- COMAR 26.11. 27.05B and C, COMAR 26.11.01.11E(1), E(2)(c) Describe:**

"B. Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.

C. Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010 Hg, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department."

The Permittee shall submit the following CEMS reports to the Department for all CEMS required to be operated with the boilers:

- a) CEM System Downtime Reports - All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to MDE-ARMA by telephone before 10 a.m. of the first regular business day following the breakdown;
- b) Quarterly CEM Summary Reports- A quarterly summary report shall be submitted to MDE-ARMA not later than 30 days following each calendar quarter. The report shall be in a format approved by MDE-ARMA and shall include the information required under COMAR 26.11.01.11E(2)(c)(i)-(vii).

**Frequency of submittal of the compliance demonstration: Quarterly**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-HAW-Unit 3  
General Reference: 40 CFR Part 72 and Part 75

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C. Control of Sulfur Dioxide Emissions

C3 - Acid Rain Rules

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring: Reference: §75.10(a)(1) and Acid Rain Permit Describe:**

The Permittee shall install, certify, operate, and maintain a SO<sub>2</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B- Monitoring Provisions.

**Testing Reference: 40 CFR Part 75, Appendix A, COMAR 26.11.03.06C Describe:**

The Permittee shall perform quality control/ quality assurance procedure on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A.

**Record Keeping Reference: See Acid Rain Permit Describe:**

The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75.

**Reporting Reference: See Acid Rain Permit Describe:**

The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-HAW-Unit 3**

**General Reference: 40 CFR Part 97 Subpart CCCCC-TR**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

C4 - 40 CFR Part 97 Subpart CCCCC-TR SO2 Group 1 Trading Program TR SO2 Group 1 Trading Program requirements (40 CFR 97.606)

**(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.613 through 97.618.

**(b) Emissions monitoring, reporting, and recordkeeping requirements.**

(1) The owners and operators, and the designated representative, of each TR SO2 Group 1 source and each TR SO2 Group 1 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.630 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.631 (initial monitoring system certification and recertification procedures), 97.632 (monitoring system out-of-control periods), 97.633 (notifications concerning monitoring), 97.634 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.635 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

(2) The emissions data determined in accordance with 40 CFR 97.630 through 97.635 shall be used to calculate allocations of TR SO2 Group 1 allowances under 40 CFR 97.611(a)(2) and (b) and 97.612 and to determine compliance with the TR SO2 Group 1 emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.630 through 97.635 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

**(c) SO2 emissions requirements. (1) TR SO2 Group 1 emissions limitation.**

(i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR SO2 Group 1 source and each TR SO2 Group 1 unit at the source shall hold, in the source's compliance account, TR SO2 Group 1 allowances available for deduction for such control period under 40 CFR 97.624(a) in an amount not less than the tons of total SO2 emissions for such control period from all TR SO2 Group 1 units at the source.

(ii). If total SO2 emissions during a control period in a given year from the TR SO2 Group 1 units at a TR SO2 Group 1 source are in excess of the TR SO2 Group 1 emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A). The owners and operators of the source and each TR SO2 Group 1 unit at the source shall hold the TR SO2 Group 1 allowances required for deduction under 40CFR 97.624(d); and

(B). The owners and operators of the source and each TR SO2 Group 1 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such

control period shall constitute a separate violation 40 CFR part 97, subpart CCCCC and the Clean Air Act.

(2) TR SO<sub>2</sub> Group 1 assurance provisions.

(i). If total SO<sub>2</sub> emissions during a control period in a given year from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such SO<sub>2</sub> emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under 40 CFR 97.625(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.625(b), of multiplying—

(A). The quotient of the amount by which the common designated representative's share of such SO<sub>2</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such SO<sub>2</sub> emissions exceeds the respective common designated representative's assurance level; and

(B). The amount by which total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state for such control period exceed the state assurance level.

(ii). The owners and operators shall hold the TR SO<sub>2</sub> Group 1 allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(iii). Total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period in a given year exceed the state assurance level if such total SO<sub>2</sub> emissions exceed the sum, for such control period, of the state SO<sub>2</sub> Group 1 trading budget under 40 CFR 97.610(a) and the state's variability limit under 40 CFR 97.610(b).

(iv). It shall not be a violation of 40 CFR part 97, subpart CCCCC or of the Clean Air Act if total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total SO<sub>2</sub> emissions from the TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period exceeds the common designated representative's assurance level.

(v). To the extent the owners and operators fail to hold TR SO<sub>2</sub> Group 1 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

(A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B). Each TR SO<sub>2</sub> Group 1 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart CCCCC and the Clean Air Act.

(3) Compliance periods.

(i). A TR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015 or the deadline for meeting the

unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.

(ii). A TR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance.

(i). A TR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR SO<sub>2</sub> Group 1 allowance that was allocated for such control period or a control period in a prior year.

(ii). A TR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through

(iii) above for a control period in a given year must be a TR SO<sub>2</sub> Group 1 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each TR SO<sub>2</sub> Group 1 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart CCCCC.

(6) Limited authorization. A TR SO<sub>2</sub> Group 1 allowance is a limited authorization to emit one ton of SO<sub>2</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:

(i). Such authorization shall only be used in accordance with the TR SO<sub>2</sub> Group 1 Trading Program; and

(ii). Notwithstanding any other provision of 40 CFR part 97, subpart CCCCC, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A TR SO<sub>2</sub> Group 1 allowance does not constitute a property right.

**(d) Title V permit revision requirements.**

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR SO<sub>2</sub> Group 1 allowances in accordance with 40 CFR part 97, subpart CCCCC.

(2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.630 through 97.635, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR part 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.606(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

**(e) Additional recordkeeping and reporting requirements.**

(1) Unless otherwise provided, the owners and operators of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator. (i). The certificate of representation under 40 CFR 97.616 for the designated representative for the source and each TR SO<sub>2</sub> Group 1 unit at the source and all



documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.616 changing the designated representative.

(ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart CCCCC.

(iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR SO2 Group 1 Trading Program.

(2) The designated representative of a TR SO2 Group 1 source and each TR SO2 Group 1 unit at the source shall make all submissions required under the TR SO2 Group 1 Trading Program, except as provided in 40 CFR 97.618. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

(1) Any provision of the TR SO2 Group 1 Trading Program that applies to a TR SO2 Group 1 source or the designated representative of a TR SO2 Group 1 source shall also apply to the owners and operators of such source and of the TR SO2 Group 1 units at the source.

(2) Any provision of the TR SO2 Group 1 Trading Program that applies to a TR SO2 Group 1 unit or the designated representative of a TR SO2 Group 1 unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR SO2 Group 1 Trading Program or exemption under 40 CFR 97.605 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR SO2 Group 1 source or TR SO2 Group 1 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification: \_\_\_\_\_ x
- Semi-Annual Monitoring Report: \_\_\_\_\_ x

Methods used to demonstrate compliance:

**Monitoring Reference:** 40 CFR 97 Subpart CCCCC-TR Describe:

The Permittee shall comply with the monitoring requirements found in §97.606, §97.630, §97.631, §97.632, and §97.633.

The Permittee operates continuous emission monitoring system (CEMS) pursuant to 40 CFR Part 75, Subpart B (for SO<sub>2</sub> monitoring) and 40 CFR Part 75, Subpart H (for NO<sub>x</sub> monitoring).

**Testing Reference: None Describe:**

See Monitoring Requirements

**Record Keeping Reference: 40 CFR 97 Subpart CCCCC-TR Describe:**

The Permittee shall comply with the recordkeeping requirements found in §97.606, §97.630, and §97.634.

**Reporting Reference: 40 CFR 97 Subpart CCCCC-TR Describe:**

The Permittee shall comply with the reporting requirements found in §97.606, §97.630, §97.633 and §97.634.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-HAW-Unit 3**

**General Reference: SO<sub>2</sub> Consent Agreement dated December 4, 2019**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

1. Beginning January 1, 2021, at all times when Unit BS1 and/or BS2 at the Brandon Shores generating station (whether operating individually or in tandem) and Unit W3 at the H.A. Wagner generating station are simultaneously operating, the following SO<sub>2</sub> emissions limits shall apply:

a. Units BS1, BS2, and W3 shall not exceed a cumulative SO<sub>2</sub> emissions limit of 3,860 pounds per hour, as measured on a 30-day rolling average, including only those hours when the applicable units are operating;

4. Beginning January 1, 2021, at all times when Unit W3 at the H.A. Wagner generating station is not operating, Unit BS1 and BS2 at the Brandon Shores generating station (whether operating individually or in tandem) shall not exceed a combined SO<sub>2</sub> emissions limit of 5,150 pounds per hour, as measured on a 1-hour average, on more than three hours per calendar year.

8. Beginning January 1, 2021, at all times when operating, Unit W3 at the H.A. Wagner generating station shall not exceed an SO<sub>2</sub> emissions limit of 1,904 pounds per hour, as measured on a 30-day rolling average.

9. Beginning January 1, 2021, at all times when operating, Unit W3 at the H.A. Wagner generating station shall not exceed a maximum rate of 3,289 pounds SO<sub>2</sub> per hour, as measured on a one-hour average.

10. Beginning January 1, 2021, at all times when operating, Unit W3 at the H.A. Wagner generating station shall not exceed a cumulative total of 336 hours per calendar year when the Unit's SO<sub>2</sub> emissions rate is greater than 2,299 pounds per hour, as measured on a one-hour average.

**Permit Shield Request: Yes**

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference: Consent Agreement dated December 4, 2019 Describe:**

14. For the purposes of Paragraphs 1-12, which require the calculation of emissions rates, an emissions rate shall be calculated as the sum of the SO<sub>2</sub> hourly emissions (lbs) of all the applicable units during the applicable period, divided by the sum of the operating hours during

the applicable period. "Operating hour" is defined as any hour or portion of an hour that a unit combusts fossil fuel.

**Testing Reference: Consent Agreement dated December 4, 2019 Describe:**

See Reporting requirements

**Record Keeping Reference: Consent Agreement dated December 4, 2019 Describe:**

See Reporting requirements

**Reporting Reference: Consent Agreement dated December 4, 2019 Describe:**

13. Raven Power will demonstrate compliance with the limitations of Paragraphs 1 through 12 through quarterly reports utilizing calculation methodologies, continuous emissions monitoring system (CEMS) availability requirements, and a report format approved by the Department. Raven Power shall submit the proposed methodologies, CEMS availability requirements, and report format within 6 months of the effective date of this consent order for approval by the Department. Raven Power shall submit each quarterly report within 30 days of the end of the applicable quarter.

15. Raven Power shall comply with the following contingency measures, which are a required component of the nonattainment SIP revision pursuant to Section 172(c)(9) of the Clean Air Act.

16. At any time that emissions from BS1, BS2, and/or W3 at the Fort Smallwood Complex exceed one or more of the SO<sub>2</sub> emissions limits or fuel oil operations limits identified in Paragraphs 1 through 12 of this Consent Order, Raven Power shall, with 48 hours of such exceedance, undertake a full-system audit of Units BS1, BS2, W1, W2, W3, and W4 (cumulatively) at the Fort Smallwood Complex and shall submit a telephone report on the next business day and a written report to the Department within 10 days of the exceedance. At any time that emissions from Units W1, W2, and/or W4 at the Fort Smallwood Complex exceed one or more of the SO<sub>2</sub> emissions limits or fuel oil operations limits identified in Paragraphs 1 through 12 of this Consent Order, Raven Power shall, within 48 hours of knowledge of fuel test results, undertake a full-system audit of Units BS1, BS2, W1, W2, W3, and W4 (cumulatively) at the Fort Smallwood Complex and shall submit a telephone report on the next business day and a written report to the Department within 10 days of the exceedance. The telephone report shall be submitted pursuant to COMAR 26.11.01.07C. A written report to satisfy this requirement shall include both (1) the results of the full-system audit, and (2) a report of excess emissions prepared pursuant to COMAR 26.11.01.07D and Section 3.4 of the Operating Permit. The full-system audit shall consist of a review of the parameters routinely monitored by the continuous emissions monitoring systems and the digital data acquisition systems installed on the SO<sub>2</sub> generating units and their control devices and programs to determine whether or not the units and their controls were operating in accordance with good engineering practices.

a. If the units or their controls were not operating in accordance with good engineering practices, then Raven Power shall implement corrective actions to ensure that the limits of this Consent Order are not exceeded.

b. If the units and controls were operating in accordance with good engineering practice, then Raven Power shall inform the Department as to the reasons for their

exceedance of one or more of their SO<sub>2</sub> emissions limits and implement corrective actions to ensure that the limits of this Consent Order are not exceeded.

c. In any case of an exceedance of an SO<sub>2</sub> emission limit or of a fuel oil operations limit, Raven Power shall document and notify the Department of the corrective actions that they have taken.

d. The audit, report of excess emissions, documentation of corrective actions taken, and associated records shall be maintained on site for five years.

17. If the Essex, Maryland monitor (AIRS ID 24-005-3001) or any other Department-approved air quality SO<sub>2</sub> monitor located within the SO<sub>2</sub> Nonattainment Area, measures a 1-hour SO<sub>2</sub> concentration exceeding 75 parts per billion (i.e. an exceedance of the 1-hour SO<sub>2</sub> NAAQS) , then the Department will notify Raven Power within 5 business days both verbally and in writing. If, however, Raven Power first notifies the Department both verbally and in writing of the monitored exceedance, then the Department will not also notify Raven Power. In either case, whether it is the Department or Raven Power who first notifies the other party of the monitor ' s exceedance of the 75 parts per billion SO<sub>2</sub> limit, within 2 business days of that first notification, Raven Power shall notify the Department whether Units BS 1 , BS2, W1 , W2, W3, and W4 were running at the time of the exceedance or within 24 hours preceding the exceedance. If any of those Units were running during that timeframe, Raven Power shall analyze the meteorological data on the day the 1-hour exceedance occurred to determine the extent the Fort Smallwood SO<sub>2</sub> emissions contributed to the 1-hour exceedance. The meteorological data analysis shall include: (1) trajectories run at three different heights (one at stack height; and two more within the boundary layer) by the National Oceanic and Atmospheric Administration' s Hysplit program or an equivalent program; and (2) an analysis of meteorological data including the Baltimore- Washington International Airport' s meteorological data and modeled upper air data using the National Weather Service's Bufkit or an equivalent program. Raven Power shall submit its meteorological data analysis, and its findings there from, to the Department within 30 days of written notification of the exceedance of the 1-hour SO<sub>2</sub> NAAQS.

**Frequency of submittal of the compliance demonstration: Quarterly**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-HAW-Unit 3

**General Reference:** COMAR 26.11.27.03B(1)-(3), (6)-(7) and COMAR 26.11.27.03E(1)-(3)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D. Control of NOx Emissions

D2 - Healthy Air Act

NOx Emission Limitations

(1) Except as provided in §E of this regulation, annual NOx emissions from each affected electric generating unit may not exceed the number of tons in §B(2) of this regulation.

(2) Annual Tonnage Limitations.

Affected Unit	Annual NOx Tonnage Limitations Beginning
	January 1, 2012
H.A. Wagner Unit 3	1,115 tons

(3) Except as provided in §E of this regulation, ozone season NOx emissions from each affected electric generating unit may not exceed the number of tons in §B(4) of this regulation.

(6) Ozone Season Tonnage Limitations.

Affected Unit	Ozone Season NOx Tonnage Limitations Beginning May 1, 2012
H.A. Wagner Unit 3	481 tons

(7) Electric System Reliability During Ozone Seasons.

(a) An exceedance of the NOx limitations in §B(4) or (6) of this regulation which occurs because PJM Interconnection, LLC or a successor independent system operator, acts to invoke "Maximum Emergency Generation", "Load Reduction", "Voltage Reduction", "Curtailed of Non-essential Building Load", or "Manual Load Dump" procedures in accordance with the current PJM Manual, or a PJM alert preceding such action as to a generating unit that has temporarily shut down in order to avoid potential interruption in electric service and maintain electric system reliability is not a violation of this chapter provided that':

(i) Within 36 hours following the action, the owner or operator of the affected electric generating unit or units notifies the Manager of the Air Quality Compliance Program of the action taken by PJM Interconnection and provides the Department with documentation of the action which is satisfactory to the Department;

(ii) Within 48 hours after completion of the action, the owner or operator of the affected unit or units provides the Department with the estimated NOx emissions in excess of the emission limitation; and

(iii) See State-only enforceable section of the permit for additional requirement.

(b) The owner or operator of an electric generating unit or system, as applicable, shall send written notice to the Manager of the Air Quality Compliance Program not later than 5 business days following the day when the cumulative ozone season NOx emissions of an electric generating unit or system, as applicable, are:

- (i) Equal to approximately 80 percent of the applicable ozone season emission limitation; and
- (ii) Equal to the applicable ozone season emission limitation.

**System-Wide Compliance Determinations.**

(1) Compliance with the emission limitations in §§B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.

(2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§B and C of this regulation.

(3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification: \_\_\_\_\_ x
- Semi-Annual Monitoring Report: \_\_\_\_\_ x

Methods used to demonstrate compliance:

**Monitoring: Reference: COMAR 26.11.27.05A, COMAR 26.11.01.01, 40 CFR Part 75 Describe:**

Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.

**Continuous Emission Monitoring Requirements-** Requires Wagner to operate all CEMS under the requirements of COMAR 26.11.01.11.

**Testing Reference: 40 CFR Part 75, Appendix A Describe:**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A.

**Record Keeping Reference: COMAR 26.11.03.06C, COMAR 26.11.01.11E(2)(d) Describe:**

The Permittee shall maintain all records necessary to demonstrate compliance with the requirements of COMAR 26.11.27.

The permittee shall maintain all information required to be reported or maintained under COMAR 26.11.01.11, on site for not less than five years, and shall make these records available to the Department upon request.

**Reporting Reference: COMAR 26.11.27.05B and C, COMAR 26.11.01.11E(1) & (2) Describe:**

B. Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.

C. Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department.

The Permittee shall submit the following CEMS reports to MDE-ARMA for all CEMS required to be operated with the boilers:

- a) CEM System Downtime Reports - All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to MDE-ARMA by telephone before 10 a.m. of the first regular business day following the breakdown;
- b) Quarterly CEM Summary Reports- A quarterly summary report shall be submitted to MDE-ARMA not later than 30 days following each calendar quarter. The report shall be in a format approved by MDE-ARMA and shall include the information required under COMAR 26.11.01.11E(2)(c)(i)-(vii).

**Frequency of submittal of the compliance demonstration: Semi-Annual**



**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-HAW-Unit 3  
General Reference: 40 CFR Part 72 and Part 75

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D. Control of NOx

D3 - Acid Rain Rules

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

**Methods used to demonstrate compliance:**

**Monitoring: Reference: §75.10(a)(1) and Acid Rain Permit Describe:**

The Permittee shall install, certify, operate, and maintain a NOx emission monitoring system that meets the requirements of 40 CFR Part 75 1 subpart B- Monitoring Provisions.

**Testing Reference: 40 CFR Part 75, Appendix A COMAR 26.11.03.06C Describe:**

The Permittee shall perform quality control/ quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A.

**Record Keeping Reference: See Acid Rain Permit Describe:**

The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75.

**Reporting Reference: See Acid Rain Permit Describe:**

The Permittee shall comply with the reporting requirements of 40 CFR Part 72 and 40 CFR Part 75.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-HAW-Unit 3**

**General Reference: 40 CFR Part 97 Subpart AAAAA-TR**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D4 - 40 CFR Part 97 Subpart AAAAA-TR NOX Annual Trading Program

TR NOX Annual Trading Program requirements (40 CFR 97.406)

**(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.413 through 97.418.

**(b) Emissions monitoring, reporting, and recordkeeping requirements.**

(1) The owners and operators, and the designated representative, of each TR NOX Annual source and each TR NOX Annual unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.430 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.431 (initial monitoring system certification and recertification procedures), 97.432 (monitoring system out-of-control periods), 97.433 (notifications concerning monitoring), 97.434 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.435 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

(2) The emissions data determined in accordance with 40 CFR 97.430 through 97.435 shall be used to calculate allocations of TR NOX Annual allowances under 40 CFR 97.411(a)(2) and (b) and 97.412 and to determine compliance with the TR NOX Annual emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.430 through 97.435 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

**(c) NOX emissions requirements.**

(1) TR NOX Annual emissions limitation.

(i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NOX Annual source and each TR NOX Annual unit at the source shall hold, in the source's compliance account, TR NOX Annual allowances available for deduction for such control period under 40 CFR 97.424(a) in an amount not less than the tons of total NOX emissions for such control period from all TR NOX Annual units at the source.

(ii). If total NOX emissions during a control period in a given year from the TR NOX Annual units at a TR NOX Annual source are in excess of the TR NOX Annual emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A). The owners and operators of the source and each TR NOX Annual unit at the source shall hold the TR NOX Annual allowances required for deduction under 40 CFR 97.424(d); and

(B). The owners and operators of the source and each TR NOX Annual unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions

and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.

(2) TR NOX Annual assurance provisions.

(i). If total NOX emissions during a control period in a given year from all TR NOX Annual units at TR NOX Annual sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NOX emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR NOX Annual allowances available for deduction for such control period under 40 CFR 97.425(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.425(b), of multiplying— (A) The quotient of the amount by which the common designated representative's share of such NOX emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NOX emissions exceeds the respective common designated representative's assurance level; and (B) The amount by which total NOX emissions from all TR NOX Annual units at TR NOX Annual sources in the state for such control period exceed the state assurance level. (ii). The owners and operators shall hold the TR NOX Annual allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(iii). Total NOX emissions from all TR NOX Annual units at TR NOX Annual sources in the State during a control period in a given year exceed the state assurance level if such total NOX emissions exceed the sum, for such control period, of the state NOX Annual trading budget under 40 CFR 97.410(a) and the state's variability limit under 40 CFR 97.410(b).

(iv). It shall not be a violation of 40 CFR part 97, subpart AAAAA or of the Clean Air Act if total NOX emissions from all TR NOX Annual units at TR NOX Annual sources in the State during a control period exceed the state assurance level or if a common designated representative's share of total NOX emissions from the TR NOX Annual units at TR NOX Annual sources in the state during a control period exceeds the common designated representative's assurance level.

(v). To the extent the owners and operators fail to hold TR NOX Annual allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

(A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B). Each TR NOX Annual allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.

(3) Compliance periods.

(i). A TR NOX Annual unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015, or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.

(ii). A TR NOX Annual unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting

the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance. (i). A TR NOX Annual allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR NOX Annual allowance that was allocated for such control period or a control period in a prior year.

(ii). A TR NOX Annual allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through

(iii) above for a control period in a given year must be a TR NOX Annual allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each TR NOX Annual allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart AAAAA.

(6) Limited authorization. A TR NOX Annual allowance is a limited authorization to emit one ton of NOX during the control period in one year. Such authorization is limited in its use and duration as follows:

(i). Such authorization shall only be used in accordance with the TR NOX Annual Trading Program; and

(ii). Notwithstanding any other provision of 40 CFR part 97, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A TR NOX Annual allowance does not constitute a property right.

**(d) Title V permit revision requirements.**

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR NOX Annual allowances in accordance with 40 CFR part 97, subpart AAAAA.

(2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.430 through 97.435, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.406(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

(e) Additional recordkeeping and reporting requirements.

(1) Unless otherwise provided, the owners and operators of each TR NOX Annual source and each TR NOX Annual unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i). The certificate of representation under 40 CFR 97.416 for the designated representative for the source and each TR NOX Annual unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.416 changing the designated representative.

(ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart AAAAA.

(iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR NOX Annual Trading Program.

(2) The designated representative of a TR NOX Annual source and each TR NOX Annual unit at the source shall make all submissions required under the TR NOX Annual Trading Program, except as provided in 40 CFR 97.418. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

(1) Any provision of the TR NOX Annual Trading Program that applies to a TR NOX Annual source or the designated representative of a TR NOX Annual source shall also apply to the owners and operators of such source and of the TR NOX Annual units at the source.

(2) Any provision of the TR NOX Annual Trading Program that applies to a TR NOX Annual unit or the designated representative of a TR NOX Annual unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR NOX Annual Trading Program or exemption under 40 CFR 97.405 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR NOX Annual source or TR NOX Annual unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR Part 97 Subpart AAAAA-TR Describe:**

The Permittee shall comply with the monitoring requirements found in §97.406, §97.430, and §97.434 for the NOX Annual Trading Program.

**Testing Reference: 40 CFR Part 97 Subpart AAAAA-TR Describe:**

See Monitoring Requirements

**Record Keeping Reference: 40 CFR Part 97 Subpart AAAAA-TR Describe:**

The Permittee shall comply with the recordkeeping requirements found in

§97.406, §97.430, and §97.434 for the NOX Annual Trading Program.

**Reporting Reference: 40 CFR Part 97 Subpart AAAAA-TR Describe:**

The Permittee shall comply with the reporting requirements found in §97.406, §97.430, §97.433 and §97.434 for the NOX Annual Trading Program.

**Frequency of submittal of the compliance demonstration: Quarterly**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-HAW-Unit 3**

**General Reference: 40 CFR Part 97 Subpart BBBBBB-TR**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

D4 - TR NOX Ozone Season Trading Program Requirements (40 CFR 97.506)

**(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.513 through 97.518.

**(b) Emissions monitoring, reporting, and recordkeeping requirements.**

(1) The owners and operators, and the designated representative, of each TR NOX Ozone Season source and each TR NOX Ozone Season unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.530 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.531 (initial monitoring system certification and recertification procedures), 97.532 (monitoring system out-of-control periods), 97.533 (notifications concerning monitoring), 97.534 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.535 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

(2) The emissions data determined in accordance with 40 CFR 97.530 through 97.535 shall be used to calculate allocations of TR NOX Ozone Season allowances under 40 CFR 97.511(a)(2) and (b) and 97.512 and to determine compliance with the TR NOX Ozone Season emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.530 through 97.535 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

**(c) NOX emissions requirements.**

(1) TR NOX Ozone Season emissions limitation.

(i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NOX Ozone Season source and each TR NOX Ozone Season unit at the source shall hold, in the source's compliance account, TR NOX Ozone Season allowances available for deduction for such control period under 40 CFR 97.524(a) in an amount not less than the tons of total NOX emissions for such control period from all TR NOX Ozone Season units at the source.

(ii). If total NOX emissions during a control period in a given year from the TR NOX Ozone Season units at a TR NOX Ozone Season source are in excess of the TR NOX Ozone Season emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A). The owners and operators of the source and each TR NOX Ozone Season unit at the source shall hold the TR NOX Ozone Season allowances required for deduction under 40 CFR 97.524(d); and



(B). The owners and operators of the source and each TR NOX Ozone Season unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart BBBBB and the Clean Air Act.

(2) TR NOX Ozone Season assurance provisions.

(i). If total NOX emissions during a control period in a given year from all TR NOX Ozone Season units at TR NOX Ozone Season sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NOX emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR NOX Ozone Season allowances available for deduction for such control period under 40 CFR 97.525(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator (A). The quotient of the amount by which the common designated representative's share of such NOX emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NOX emissions exceeds the respective common designated representative's assurance level; and

(B). The amount by which total NOX emissions from all TR NOX Ozone Season units at TR NOX Ozone Season sources in the state for such control period exceed the state assurance level.

(ii). The owners and operators shall hold the TR NOX Ozone Season allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(iii). Total NOX emissions from all TR NOX Ozone Season units at TR NOX Ozone Season sources in the state during a control period in a given year exceed the state assurance level if such total NOX emissions exceed the sum, for such control period, of the State NOX Ozone Season trading budget under 40 CFR 97.510(a) and the state's variability limit under 40 CFR 97.510(b).

(iv). It shall not be a violation of 40 CFR part 97, subpart BBBBB or of the Clean Air Act if total NOX emissions from all TR NOX Ozone Season units at TR NOX Ozone Season sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total NOX emissions from the TR NOX Ozone Season units at TR NOX Ozone Season sources in the state during a control period exceeds the common designated representative's assurance level.

(v). To the extent the owners and operators fail to hold TR NOX Ozone Season allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

(A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and (B). Each TR NOX Ozone Season allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart BBBBB and the Clean Air Act.

(3) Compliance periods.

(i). A TR NOX Ozone Season unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of May 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.530(b) and for each control period thereafter.

(ii). A TR NOX Ozone Season unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.530(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance.

(i). A TR NOX Ozone Season allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR NOX Ozone Season allowance that was allocated for such control period or a control period in a prior year.

(ii). A TR NOX Ozone Season allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a TR NOX Ozone Season allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each TR NOX Ozone Season allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart BBBBB.

(6) Limited authorization. A TR NOX Ozone Season allowance is a limited authorization to emit one ton of NOX during the control period in one year. Such authorization is limited in its use and duration as follows:

(i). Such authorization shall only be used in accordance with the TR NOX Ozone Season Trading Program; and

(ii). Notwithstanding any other provision of 40 CFR part 97, subpart BBBBB, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A TR NOX Ozone Season allowance does not constitute a property right.

**(d) Title V permit revision requirements.**

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR NOX Ozone Season allowances in accordance with 40 CFR part 97, subpart BBBBB.

(2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.530 through 97.535, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.506(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

**(e) Additional recordkeeping and reporting requirements.**

(1) Unless otherwise provided, the owners and operators of each TR NOX Ozone Season source and each TR NOX Ozone Season unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

- (i). The certificate of representation under 40 CFR 97.516 for the designated representative for the source and each TR NOX Ozone Season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.516 changing the designated representative.
- (ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart BBBBB.
- (iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR NOX Ozone Season Trading Program.

(2) The designated representative of a TR NOX Ozone Season source and each TR NOX Ozone Season unit at the source shall make all submissions required under the TR NOX Ozone Season Trading Program, except as provided in 40 CFR 97.518. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

(1) Any provision of the TR NOX Ozone Season Trading Program that applies to a TR NOX Ozone Season source or the designated representative of a TR NOX Ozone Season source shall also apply to the owners and operators of such source and of the TR NOX Ozone Season units at the source.

(2) Any provision of the TR NOX Ozone Season Trading Program that applies to a TR NOX Ozone Season unit or the designated representative of a TR NOX Ozone Season unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR NOX Ozone Season Trading Program or exemption under 40 CFR 97.505 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR NOX Ozone Season source or TR NOX Ozone Season unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report:     x
- Annual Compliance Certification:     x
- Semi-Annual Monitoring Report:     x

Methods used to demonstrate compliance:

**Monitoring Reference: 40 CFR Part 97 Subpart BBBBB-TR Describe:**

The Permittee shall comply with the monitoring requirements found in §97.506, §97.530, and §97.534 for the NOX Ozone Season Trading Program.

**Testing Reference: 40 CFR Part 97 Subpart BBBBB-TR Describe:**

See Monitoring Requirements

**Record Keeping Reference: 40 CFR Part 97 Subpart BBBBB-TR Describe:**

The Permittee shall comply with the recordkeeping requirements found in §97.506, §97.530, and §97.534 for the NOX Ozone Season Trading Program.

**Reporting Reference: 40 CFR Part 97 Subpart BBBBB-TR Describe:**

The Permittee shall comply with the reporting requirements found in §97.506, §97.530, §97.533, and §97.534 for the NOX Ozone Season Trading Program.

**Frequency of submittal of the compliance demonstration: Quarterly**

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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-HAW-CT

General Reference: COMAR 26.11.09.05A(2)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

A. Visible Emissions Limitation

Visible Emissions. "In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers."

Exceptions. "Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, start-up, or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring: Reference: COMAR 26.11.03.06C Describe:**

A. The Permittee shall verify that there is no visible emissions when burning No. 2 fuel oil. An observer shall perform an EPA Reference Method 9 observation of stack emissions for 18-minute period once every 168 block hours of operation on oil or at a minimum once per year.

The Permittee shall perform the following, if emissions are visible to human observer:

- (a) inspect combustion control system and combustion turbine operations,
- (b) perform all necessary adjustments and/or repairs to the boilers within 48 hours of operation so that visible emissions are eliminated; and
- (c) document in writing the results of inspections, adjustments and/or repairs to the boiler.

The Permittee shall after 48 hours of operation, if the required adjustments and/or repairs had not eliminated the visible emissions, perform another Method 9 observation once daily when the boiler is operating on No.2 fuel oil for 18 minutes until corrective action have eliminated visible emissions.

**Testing Reference: None Describe:**

See Monitoring Requirements

**Record Keeping Reference: COMAR 26.11.03.06C Describe:**

A. The Permittee shall maintain records of the results of visual emissions observations for a period of at least 5 years.

**Reporting Reference: COMAR 26.11.0.3.06C Describe:**

A. The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations."

Frequency of submittal of the compliance demonstration: **Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-HAW-CT

General Reference: COMAR 26.11.09.07A(2)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

Control of Sulfur Oxides from fuel burning equipment. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV:

(b) Distillate fuel oil, 0.3 percent;

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring: Reference: COMAR 26.11.03.06C Describe:**

B. The Permittee shall obtain fuel supplier certifications stating that the fuel oil is in compliance with the sulfur content in the fuel limitation or obtain sulfur in fuel analyses of oil that is representative of the oil burned.

**Testing Reference: None Describe:**

See Monitoring Requirement

**Record Keeping Reference: COMAR 26.11.03.06C Describe:**

B. The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with the sulfur content in the fuel limitation or the sulfur in fuel analyses for at least 5 years.

**Reporting Reference: COMAR 26.11.03.06C Describe:**

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B. The Permittee shall submit fuel certification report or fuel analyses if requested by the Department.

Frequency of submittal of the compliance demonstration: **Semi-Annual**



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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-HAW-CT  
General Reference: COMAR 26.11.09.08G

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

Requirements of Fuel-Burning Equipment with a Capacity Factor of 15 percent or less and  
Combustion Turbines with a capacity factor greater than 15%

(1) "A person who owns or operates fuel-burning equipment with a capacity factor (as  
defined in 40 CFR Part 72.2) of 15 percent or less shall:

- (a) Provide certification of the capacity factor of the equipment to the Department in  
writing;
- (b) For fuel-burning equipment that operates more than 500 hours during a calendar  
year, perform a combustion analysis and optimize combustion at least once annually;
- (c) Maintain the results of the combustion analysis and any stack tests at the site for at  
least 2 years and make these results available to the Department and the EPA upon  
request;
- (d) Not applicable and
- (e) Not applicable"

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring: Reference: COMAR 26.11.03.06C Describe:**

C. The Permittee shall calculate the capacity factor of the combustion turbine for each calendar  
year within 30 days after the end of each year.

**Testing Reference: COMAR 26.11.09.08G(1)(b) Describe:**

C. The Permittee shall perform a combustion analysis and optimize combustion at least once  
annually when the hours of operation exceed 500 during the year.

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**Record Keeping Reference: COMAR 26.11.03.06C and COMAR 26.11.09.08G(1)(c) Describe:**

C. The Permittee shall maintain:

- (1) Records of the calculated capacity factors.
- (2) Records of hour of operation.
- (3) Records of combustion analysis performed if the hours of operation exceed 500.

**Reporting Reference: COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C Describe:**

C. The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing by April 1st of the following calendar year.

Frequency of submittal of the compliance demonstration: **Semi-Annual**

MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: FSC-HAW-MH

General Reference: COMAR 26.11.06.03B, COMAR 26.11.06.03D, 26.11.02.02H

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

A1 - Particulate Matter from Confined Sources.

“(2) Areas III and IV. (a) A person may not cause or permit to be discharged into the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD (68.7 mg/dscm).”The Permittee shall design the DSI sorbent storage silo bin vent filters to achieve a controlled emission rate of no more than 0.03 gr/SCFD.

A2 - Particulate Matter from Materials Handling and Construction.

"A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, but not be limited to, the following when appropriate as determined by the control officer:

- (1) Use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land.
- (2) Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts.
- (3) Installation and use of hoods, fans, and dust collectors to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting of buildings or other similar operations.
- (4) Covering, at all times when in motion, open-bodied vehicles transporting materials likely to create air pollution. Alternate means may be employed to achieve the same results as would covering the vehicles.
- (5) The paving of roadways and their maintenance in clean condition.
- (6) The prompt removal from paved streets of earth or other material which has been transported there by trucks or earth moving equipment or erosion by water."

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring: Reference: COMAR 26.11.03.06C Describe:**

The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMPs) that will be used to prevent particulate matter from becoming airborne.

The Permittee shall update the Best Management Practices (BMP) Plan, as required by the initial Part 70 permit for this facility when a revision is needed to ensure that reasonable precautions will be used to prevent particulate matter from this equipment from becoming airborne and that adequate inspection will be conducted and documented. The BMP shall include provisions for routine inspections of emission sources and controls, corrective measures, and recordkeeping for such.

The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the ash handling and solid fossil fuel handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material.

**Testing Reference: None Describe:**

See monitoring and recordkeeping requirements.

**Record Keeping Reference: COMAR 26.11.03.06C, COMAR 26.11.02.02H Describe:**

1. The Permittee shall keep the results of the monthly inspections for a period of five (5) years. The Permittee shall maintain the written reasonable precautions (BMPs) at the facility and make it available to the Department upon request.
2. The Permittee shall maintain records necessary to demonstrate compliance with the filterable PM emission rate from the DSI sorbent storage silo bin vent filters, including equipment specifications, and make these records available to the Department upon request.

**Reporting Reference: COMAR 26.11.03.06C Describe:**

The Permittee shall report the results of the inspections and a copy of the current BMP plan upon request by the Department.

Frequency of submittal of the compliance demonstration: **Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-HAW-MH**

**General Reference: 40 CFR 60.254**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

40 CFR Part 60, Subpart Y—Standards of Performance for Coal  
Preparation and Processing Plants

(b) On and after the date on which the performance test is conducted or required to be completed under §60.8, whichever date comes first, an owner or operator of any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified after April 28, 2008, must meet the requirements in paragraphs (b)(1) through (3) of this section, as applicable to the affected facility.

(1) Except as provided in paragraph (b)(3) of this section, the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit 10 percent opacity or greater.

(2) The owner or operator must not cause to be discharged into the atmosphere from any mechanical vent on an affected facility gases which contain particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf).

(3) Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of paragraph (b)(1) of this section.

**NOTE: The limits in this section only apply to the four (4) coal conveyors that transport coal to and from the coal additive mixing facility.**

**Permit Shield Request: Yes**

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

**Monitoring: Reference: None Describe:**

See Recordkeeping Requirements

**Testing Reference: 40 CFR 60.255 Describe:**

(b) An owner or operator of each affected facility that commenced construction, reconstruction, or modification after April 28, 2008, must conduct performance tests according to the requirements of §60.8 and the methods identified in §60.257 to demonstrate compliance with the applicable emissions standards in this subpart as specified in paragraphs (b)(1) and (2) of this section.

(2) For each affected facility subject to an opacity standard, an initial performance test must be performed. Thereafter, a new performance test must be conducted according to the requirements in paragraphs (b)(2)(i) through (iii) of this section, as applicable, except as provided for in paragraphs (e) and (f) of this section. Performance test and other compliance requirements for coal truck dump operations are specified in paragraph (h) of this section.

(i) If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test must be conducted within 90 operating days of the date that the previous performance test was required to be completed.

(ii) If all 6-minute average opacity readings in the most recent performance test are equal to or less than half the applicable opacity limit, a new performance test must be conducted within 12 calendar months of the date that the previous performance test was required to be completed.

(iii) An owner or operator of an affected facility continuously monitoring scrubber parameters as specified in §60.256(b)(2) is exempt from the requirements in paragraphs (b)(2)(i) and (ii) if opacity performance tests are conducted concurrently with (or within a 60-minute period of) PM performance tests.

(c) If any affected coal processing and conveying equipment (e.g., breakers, crushers, screens, conveying systems), coal storage systems, or coal transfer and loading systems that commenced construction, reconstruction, or modification after April 28, 2008, are enclosed in a building, and emissions from the building do not exceed any of the standards in § 60.254 that apply to the affected facility, then the facility shall be deemed to be in compliance with such standards.

**Record Keeping Reference: 40 CFR 60.258(a) Describe:**

The owner or operator of a coal preparation and processing plant that commenced construction, reconstruction, or modification after April 28, 2008, shall maintain in a logbook

(written or electronic) on-site and make it available upon request. The logbook shall record the following:

- (1) The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from manufacturer recommendation, if any, shall be noted.
- (2) The date and time of periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted.
- (3) The amount and type of coal processed each calendar month.
- (4) The amount of chemical stabilizer or water purchased for use in the coal preparation and processing plant.
- (5) Monthly certification that the dust suppressant systems were operational when any coal was processed and that manufacturer's recommendations were followed for all control systems. Any variance from the manufacturer's recommendations, if any, shall be noted.
- (6) Monthly certification that the fugitive coal dust emissions control plan was implemented as described. Any variance from the plan, if any, shall be noted. A copy of the applicable fugitive coal dust emissions control plan and any letters from the Administrator providing approval of any alternative control measures shall be maintained with the logbook. Any actions, e.g. objections, to the plan and any actions relative to the alternative control measures, e.g. approvals, shall be noted in the logbook as well.

**Reporting Reference: 40 CFR 60.7, 60.258(b)(3) and (d) Describe:**

- (b) For the purpose of reports required under section 60.7(c), any owner operator subject to the provisions of this subpart also shall report semiannually periods of excess emissions as follow:
- (3) All 6-minute average opacities that exceed the applicable standard.
- (d) After July 1, 2011, within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with this subpart, the owner or operator of the affected facility must submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE data base available at <http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main>. For performance tests that cannot be entered into WebFIRE (i.e., Method 9 of appendix A-4 of this part opacity performance tests) the owner or operator of the affected facility must mail a summary copy to United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; mail code: D243-01; RTP, NC 27711.

**Frequency of submittal of the compliance demonstration: Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-HAW-MH

**General Reference:** CPCN No. 9338 Condition B-VI-3

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

The Permittee shall apply a chemical dust suppressant on an as needed basis to the subbituminous coal storage pile in the coal yard to reduce fugitive PM emissions. The Permittee shall apply the chemical dust suppressant in accordance with the manufacturer's recommended application instructions. A dust suppressant shall also be applied, as needed to reduce fugitive PM emissions, to the following subbituminous coal transfer points: Belt 1 to Belt 2 (barge unloading); Belt 2 to Belt 3; Belt 3 to MB Belt 3; Under-pile Syntron to MC Belt; MC Belt to Bradford Breaker; Bradford Breaker to D Belt; Conveyor D to Pug Mill Feed Conveyor (or F Belt); Pug Mill Product Conveyor to Conveyor F; and F Belt to G Belt or M Belt.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report:   x

Methods used to demonstrate compliance:

**Monitoring Reference:** CPCN No. 9338 Condition B-VI-5, COMAR 26.11.02.02H Describe:

The Permittee perform a monthly inspection of the material handling transfer points and operations to verify that the reasonable precautions (e.g., BMPs) are being implemented. During the monthly inspection, The Permittee shall perform a visual observation for a minute period of the emissions points of the solid fossil fuel handling system and the ash handling system to determine whether PM is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the solid fossil fuel and ash handling systems are transferring material.

**Testing Reference:** None Describe:

See Monitoring Requirements.

**Record Keeping Reference:** CPCN No. 9338 Condition B-VI-4, 6, 7, COMAR 26.11.02.02H



**Describe:**

The Permittee shall update the facility's existing plan that contains an explanation of the reasonable precautions or best management practices (BMPs) that will be used to prevent particulate matter from becoming airborne. The updated BMPs shall also document procedures for chemical dust suppressant application. The Permittee shall update the BMP within 6 months of issuance of the CPCN.

The Permittee shall keep the results of the monthly inspections for a period of five years.

The Permittee shall maintain the written reasonable precautions (e.g., BMPs) at the facility and make it available to the Department upon request.

**Reporting Reference: CPCN No. 9338 Condition B-VI-8, COMAR 26.11.02.02H Describe:**

The Permittee shall report the results of the monthly inspections and a copy of the current BMP plan upon request by the Department.

**Frequency of submittal of the compliance demonstration: Semi-Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.:** FSC-BS-EG  
**General Reference:** COMAR 26.11.09.05(E)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

COMAR 26.11.09.05E(2): Emissions During Idle Mode. A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.

COMAR 26.11.09.05E(3): Emissions During Operating Mode. A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

COMAR 26.11.09.05E(4) *Exceptions to Visible Emissions Standards for I/C Engines:*

- (i) COMAR 26.11.09.05E (2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.
- (ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
  - (1) Engines that are idled continuously when not in service: 30 minutes,
  - (2) All other engines: 15 minutes.
- (iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair, or testing is being performed by qualified mechanics.

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

**Monitoring: Reference:** COMAR 26.11.03.06C **Describe:**

The Permittee shall properly operate and maintain the engines in a manner to minimize visible emissions.

**Testing Reference: None Describe:**

See Monitoring Requirements

**Record Keeping Reference: COMAR 26.11.03.06C Describe:**

The Permittee shall retain records of preventative maintenance that relate to combustion performance on site for at least 5 years and make these records available to the Department upon request.

**Reporting Reference: None Describe:**

The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations."

**Frequency of submittal of the compliance demonstration: Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-EG

General Reference: COMAR 26.11.09.07(A)(2)(b)

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

Control of Sulfur Oxides from fuel burning equipment. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV:

(b) Distillate fuel oils, 0.3 percent;

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

**Monitoring: Reference: COMAR26.11.03.06C Describe:**

The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil is in compliance with the limitation on the sulfur content of the fuel oil or obtain sulfur in fuel analyses of oil that is representative of the oil burned.

**Testing Reference: None Describe:**

See Monitoring Requirements

**Record Keeping Reference: COMAR 26.11.09.07C Describe:**

The Permittee shall maintain records of fuel supplier's certification or sulfur in fuel analyses and shall make records available to the Department upon request.

**Reporting Reference: COMAR 26.11.09.07C Describe:**

The Permittee shall report fuel supplier certification or a copy of the sulfur in fuel analyses to the Department upon request.

**Frequency of submittal of the compliance demonstration: Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: FSC-BS-EG  
General Reference: COMAR 26.11.09.08G

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 percent or less and Combustion Turbines with a Capacity Factor Greater than 15 percent.

(1) "A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

(a) Provide certification of the capacity factor of the equipment to the Department in writing;

(b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;

(c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;

(d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and

(e) Maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request."

**Permit Shield Request:** Yes

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

**Monitoring: Reference: COMAR 26.11.03.06C Describe:**

The Permittee shall calculate the capacity factor of the engines for each calendar year within 30 days after the end of each year.

**Testing Reference: COMAR 26.11.09.08G(1)(b) Describe:**

C. Control of Nitrogen Oxides Emissions NOX RACT

The Permittee shall perform a combustion analysis and optimize combustion at least once annually when the hours of operation exceed 500 during the year.

**Record Keeping Reference:** COMAR 26.11.03.06C, COMAR 26.11.02.19.C(1)(b), COMAR 26.11.09.08G(1)(c), COMAR 26.11.09.08G(1)(e) **Describe:**

The Permittee shall maintain:

- (1) Records of the calculated capacity factors.
- (2) Records of hour of operation.
- (3) Records of combustion analysis performed if the hours of operation exceed 500.
- (4) Record of training program attendance for each operator.

**Reporting Reference:** COMAR 26.11.03.06C, COMAR 26.11.09.08G(1)(a),(e) **Describe:**

The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report.

The Permittee shall submit a record of training program attendance for each operator to the Department upon request.

**Frequency of submittal of the compliance demonstration: Annual**

**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS**

**Emissions Unit No.: FSC-BS-EG**

**General Reference: 40 CFR 63 Subpart ZZZZ**

**Briefly describe the Emission Standard/Limit or Operational Limitation:**

**ZZZZ**—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

“(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for nonemergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.”

Note: Engines that operate in non-emergency situations are considered load shaving units under COMAR 26.11.36-Distributed Generation and must meet the requirements of COMAR 26.11.36.03.

**Permit Shield Request: Yes**

**Compliance Demonstration:**

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification:   x
- Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

**Monitoring: Reference: 40 CFR 63.6625(f) Describe:**

The Permittee in order to demonstrate that the diesel engine meets the definition of an emergency engine must install a non-resettable hour meter on the emergency generator if one is not already installed.

**Testing Reference: None Describe:**

See Monitoring Requirements

**Record Keeping Reference: COMAR 26.11.03.06C Describe:**

(1) The Permittee shall maintain for the emergency generators a log of the hours of operation (including dates and times), and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.) which are recorded by a non-resettable hour meter. The Permittee must document how many hours are spent for emergency operations, including what classified the operation as an emergency and how many hours are spent in non-emergency operation.

**Reporting Reference: COMAR 26.11.03.06C Describe:**

The Permittee shall report the hours of operation, and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.) to the Department in the annual emission certification report due on April 1 of each year.

**Frequency of submittal of the compliance demonstration: Annual**





MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3C. OBSOLETE, EXTRANEOUS, OR INSIGNIFICANT PERMIT CONDITIONS

List permit to construct conditions which should be considered to be obsolete, extraneous, or environmentally insignificant.

Emissions Unit No.: FSC-BS-Unit 2 Permit to Construct No. 24-003-0468

Emissions Point No.	Date Permit Issued	Condition No.	Brief Description of Condition and Reason for Exclusion
FSC-BS-Unit2-EP1	January 1, 2017	COMAR 26.11.01.04	Raven requests that lead emissions testing be removed from Testing and Monitoring requirements. This once per permit term requirement was new in the prior permit and based on the low results from the conducted testing and that it is a state-only requirement, Raven does not believe that this testing should need to be repeated.

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

**SECTION 3C. OBSOLETE, EXTRANEOUS, OR INSIGNIFICANT PERMIT CONDITIONS**

List permit to construct conditions which should be considered to be obsolete, extraneous, or environmentally insignificant.

Emissions Unit No.: FSC-HAW-Unit 2 Permit to Construct No. 24-003-0468

Emissions Point No.	Date Permit Issued	Condition No.	Brief Description of Condition and Reason for Exclusion
FSC-HAW-Unit 2-EP1	January 1, 2017	COMAR 26.11.01.04	Raven requests that lead emissions testing be removed from Testing and Monitoring requirements. This once per permit term requirement was new in the prior permit and based on the low results from the conducted testing and that it is a state-only requirement, Raven does not believe that this testing should need to be repeated.
FSC-HAW-Unit 2-EP1	January 1, 2017	Table IV-8a	The requirements to develop and maintain a CAM Plan are no longer applicable for this unit as burning natural gas has reduced the pre-control potential emissions to less than 100% of the major source threshold for particulate matter. As such, Raven believes the CAM Plan for this unit is not required.
FSC-HAW-Unit 2-EP1	January 1, 2017	Table IV-12	The unit is no longer subject to 40 CFR 63 Subpart UUUUU (Utility MACT). This change in regulatory applicability due to this unit changing from a coal-fired unit to a natural gas-fired unit.
FSC-HAW-Unit 2-EP1	January 1, 2017	Table IV-8.1.C.2 and D.2 (COMAR 26.11.27)	The unit is no longer subject to COMAR 26.11.27 (Emission Limits for Power Plants). This change in regulatory applicability due to this unit changing from a coal-fired unit to a natural gas-fired unit.
FSC-HAW-Unit 2-EP1	January 1, 2017	COMAR 26.11.38	The unit is no longer subject to COMAR 26.11.38 (Control of NOx Emissions from Coal-Fired Electric Generating Units). This change in regulatory applicability due to this unit changing from a coal-fired unit to a natural gas-fired unit.
FSC-HAW-Unit 2-EP1	January 1, 2017	Table IV-8.1.B (COMAR 26.11.09.06)	The unit is no longer subject to COMAR 26.11.09.06 (Particulate Matter Standards). This change in regulatory applicability due to this unit changing from a coal-fired unit to a natural gas-fired unit.





**SECTION 3E. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS FOR AN ALTERNATE OPERATING SCENARIO**

Scenario No.: \_\_\_\_\_

Emissions Unit No.: \_\_\_\_\_ General Reference: \_\_\_\_\_

Briefly describe any applicable Emissions Standard/Limits/Operational Limitations:

Not Applicable

**Compliance Demonstration**

Methods used to demonstrate compliance:

**MONITORING: TESTING:**

**RECORD KEEPING:**

**REPORTING:**

**Frequency of submittal of the compliance demonstration:**

SECTION 4-1. CONTROL EQUIPMENT

<p>1. Associated Emissions Units No.: <u>FSC-BS-Unit 1 and FSC-BS-Unit 2</u></p>	<p>2. Emissions Point No.: <u>FSC-BS-Unit1-EP1, FSC-BS-Unit2-EP 1</u></p>
<p>3. <u>Type and Description of Control Equipment:</u></p> <p><b><u>Electrostatic precipitator and fabric filter baghouse for the control of PM/PM<sub>10</sub>; Selective Catalytic Reduction (SCR) for the control of NO<sub>x</sub>; dry sorbent injection and powdered activated carbon (PAC) injection for the control of mercury; wet flue gas desulfurization (FGD) for the control of SO<sub>2</sub>;</u></b></p>	
<p>4. Pollutants Controlled:</p>	<p>Control Efficiency:</p>
<p>PM/PM<sub>10</sub></p>	<p>99.5% min.</p>
<p>NO<sub>x</sub></p>	<p>90% (short term)</p>
<p>SO<sub>2</sub></p>	<p>95%</p>
<p>Mercury</p>	<p>90%</p>
<p></p>	<p></p>
<p></p>	<p></p>
<p></p>	<p></p>
<p>5. Capture Efficiency: 99.9%</p>	

SECTION 4-2. CONTROL EQUIPMENT

1. Associated Emissions Units No.: <b><u>FSC-HAW-Unit 1</u></b>	2. Emissions Point No.: <b><u>FSC-HAW-EP 1</u></b>
3. <u>Type and Description of Control Equipment:</u>  <b><u>Electrostatic precipitator for PM/PM<sub>10</sub> control</u></b>	
4. Pollutants Controlled:	Control Efficiency:
PM/PM <sub>10</sub>	99.5% min.
5. Capture Efficiency: 99.9%	



SECTION 4-3. CONTROL EQUIPMENT

<p>1. Associated Emissions Units No.: <u>FSC-HAW-Unit 2 and Unit 3</u></p>	<p>2. Emissions Point No.: <u>FSC-HAW-Unit2-EP 1, FSC-HAW-Unit3-EP 1</u></p>
<p>3. <u>Type and Description of Control Equipment:</u></p> <p><b><u>Powdered activated carbon (PAC) injection as needed for the control of mercury (Unit 3);</u></b></p> <p><b><u>Electrostatic precipitator for the control of PM/PM<sub>10</sub>; Selective Non-Catalytic Reduction (SNCR) for the control of NO<sub>x</sub> (Unit 2); Selective Catalytic Reduction (SCR) for the control of NO<sub>x</sub> (Unit 3); dry sorbent injection system (Unit 3).</u></b></p>	
<p>4. Pollutants Controlled:</p>	<p>Control Efficiency:</p>
<p>PM/PM<sub>10</sub></p>	<p>99.5% min.</p>
<p>NO<sub>x</sub></p>	<p>90% (short term) for SCR</p>
<p>NO<sub>x</sub></p>	<p>30% (short term) for SNCR</p>
<p>Mercury (Unit 3 only)</p>	<p>90%</p>
<p></p>	<p></p>
<p></p>	<p></p>
<p></p>	<p></p>
<p>5. Capture Efficiency: 99.9%</p>	

SECTION 4-4. CONTROL EQUIPMENT

1. Associated Emissions Units No.: <u>FSC-HAW-Unit 4</u>	2. Emissions Point No.: <u>FSC-HAW-Unit4-EP1</u>
3. <u>Type and Description of Control Equipment:</u>  <b><u>Mechanical collector (multiple cyclone) for PM/PM<sub>10</sub> control.</u></b>	
4. Pollutants Controlled:	Control Efficiency:
PM/PM <sub>10</sub>	80 % estimated
5. Capture Efficiency: 99.9%	

SECTION 4-5. CONTROL EQUIPMENT

<p>1. Associated Emissions Units No.: <u>FSC-BS-MH, FSC-BS-LSH</u></p>	<p>2. Emissions Point No.: <u>FSC-BS-MH, FSC-BS-LSH</u></p>
<p>3. <u>Type and Description of Control Equipment:</u>   <u>Fabric filter vents on limestone/lime/Powdered Activated Carbon/dry sorbent silos for PM/PM<sub>10</sub> control</u></p>	
<p>4. Pollutants Controlled:</p>	<p>Control Efficiency:</p>
<p>PM/PM<sub>10</sub></p>	<p>Constant outlet concentration of 0.01 gr/scf</p>
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<p></p>	<p></p>
<p></p>	<p></p>
<p></p>	<p></p>
<p>5. Capture Efficiency: 99.9%</p>	

SECTION 4-6. CONTROL EQUIPMENT

<p>1. Associated Emissions Units No.: <u>FSC-BS-MH, FSC-BS-GH, FSC-HAW-MH</u></p>	<p>2. Emissions Point No.: <u>FSC-BS-MH, FSC-BS-GH</u></p>
<p>3. <u>Type and Description of Control Equipment:</u>   <u>Filters on gypsum vacuum belts and coal handling transfer point.</u></p>	
<p>4. Pollutants Controlled:</p>	<p>Control Efficiency:</p>
<p>PM/PM<sub>10</sub></p>	<p>~95%</p>
<p> </p>	<p> </p>
<p> </p>	<p> </p>
<p> </p>	<p> </p>
<p> </p>	<p> </p>
<p> </p>	<p> </p>
<p> </p>	<p> </p>
<p>5. Capture Efficiency: 99.9%</p>	

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

**SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS**

**List all applicable pollutants in tons per year (tpy) pertaining to this facility. The Emissions Unit No. should be consistent with numbers used in Section 3. Attach a copy of all calculations.**

Pollutant	NO <sub>x</sub>	VOC	SO <sub>2</sub>	CO	Lead
CAS Number					
Emissions Unit #FSC-BS-Unit1	N/A - See note below				
Emissions Unit #FSC-BS-Unit2					
Emissions Unit #FSC-BS-AuxBlr1					
Emissions Unit #FSC-BS-AuxBlr2					
Emissions Unit #FSC-HAW-Unit1					
Emissions Unit #FSC-HAW-Unit2					
Emissions Unit #FSC-HAW-Unit3					
Emissions Unit #FSC-HAW-Unit4					
Emissions Unit #FSC-HAW-CT					
Emissions Unit #FSC-HAW-MH					
Emissions Unit #FSC-BS-MH					
Emissions Unit #FSC-BS-LSH					
Emissions Unit #FSC-BS-GH					
Emissions Unit #FSC-BS-EG					
Emissions Unit #FSC-QP					
Emissions from Internal Combustion Engines					
Total					

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Pollutant	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	HAPs
CAS Number				
Emissions Unit #FSC-BS-Unit1				
Emissions Unit #FSC-BS-Unit2				
Emissions Unit #FSC-BS-AuxBlr1				
Emissions Unit #FSC-BS-AuxBlr2				
Emissions Unit #FSC-HAW-Unit1				
Emissions Unit #FSC-HAW-Unit2				
Emissions Unit #FSC-HAW-Unit3				
Emissions Unit #FSC-HAW-Unit4				
Emissions Unit #FSC-HAW-CT				
Emissions Unit #FSC-HAW-MH				
Emissions Unit #FSC-BS-MH				
Emissions Unit #FSC-BS-LSH				
Emissions Unit #FSC-BS-GH				
Emissions Unit #FSC-BS-EG				
Emissions Unit #FSC-QP				
Emissions from Internal Combustion Engines				
Total				

**\*Note that this section is not required per MDE’s Renewal Part 70 application instructions since the facility is not claiming an exemption based on an emissions level cutoff in a standard that has been issued for the category to which the emissions unit potentially belong and is not resolving a dispute over whether a particular requirement is applicable or whether a source is major for a particular pollutant.**

**SECTION 6. EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS**

**Describe and cite the applicable requirements to be exempted. Complete this Section only if the facility is claiming exemptions from or the non-applicability of any federally enforceable requirements.**

1. Applicable Requirement: **Not Applicable.**

2. Brief Description:

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3. Reasons for Proposed Exemption or Justification of Non-applicability:

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SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS UNITS

1. Emissions Unit #	Anticipated Compliance Date
Applicable Federally Enforceable Requirement being Violated: <b>Not Applicable.</b>	

2. Description of Plan to Achieve Compliance:

Certified Progress Reports for sources in noncompliance shall be submitted at least quarterly to the Department.



STATE-ONLY ENFORCEABLE  
REQUIREMENTS

Facility Information:

<p>Name of Facility: <b>Fort Smallwood Complex Electric Generating Station</b>                  County: <b>Anne Arundel</b></p>
<p>Premises Number: <b>24-003-0468</b></p>
<p>Street Address:  <b>1005 Brandon Shores Road, Baltimore, MD 21226</b></p>
<p>24-hour Emergency Telephone Number for Air Pollution Matters:  <b>410-787-5531</b></p>
<p>Type of Equipment (List Significant Units):  <u><b>The Fort Smallwood Complex is located in Northern Anne Arundel County, off of Fort Smallwood Road. The Complex consists of two generating stations, Brandon Shores and H.A. Wagner, an office building, and shops facility. The Brandon Shores Generating Station consists of two coal fired steam boilers for electrical generation, two auxiliary boilers for plant heating and start-up, two 500 HP diesel-fired engines to provide water to the flue gas sulfurization system during emergencies, and coal, ash, limestone and gypsum handling facilities. The H.A. Wagner Generating Station consists of the following equipment: one coal fired steam boiler, one natural gas fired steam boiler, one No. 6 oil or natural gas fired steam boiler, one No.6 oil fired steam boiler, and one No. 2 oil fired combustion turbine. The station also includes coal and ash handling equipment. There is also a 748 HP diesel-fired emergency generator at the Fort Smallwood Complex to provide back-up power.</b></u></p>

**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY  
ENFORCEABLE REQUIREMENTS**

**STATE-ONLY**

Registration No.: Facility-Wide

Emissions Unit No.: Facility-Wide General Reference: COMAR 26.11.06.08, COMAR 26.11.06.09

**Briefly describe the requirement and the emissions limit (if applicable):**

COMAR 26.11.06.08 which prohibits the operation or maintenance of an installation or premises in such manner that a nuisance or air pollution is created.

COMAR 26.11.06.09 which prohibits the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.

**Method used to demonstrate compliance:**

The facility will be operated and maintained to minimize the potential for discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created. Corrective actions will be taken for any nuisances created.

**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY  
ENFORCEABLE REQUIREMENTS**

**STATE-ONLY**

Registration No.: **3-0015, 3-0016**

Emissions Unit No.: **FSC-BS-Unit 1, FSC-BS-Unit 2** General Reference: **PM CEMS Consent**

**Agreement signed April 19, 2016.**

**Briefly describe the requirement and the emissions limit (if applicable):**

The Permittee shall maintain and operate a Particulate Matter Continuous Emissions Monitoring System ("PM CEMS") that meets the standards identified in the PM CEMS Consent Agreement signed April 19, 2016.

**Method used to demonstrate compliance:**

The Permittee will operate a CEMS that meets the requirements identified in the PM CEMS Consent Agreement signed April 19, 2016 including calibrations in accordance with the QAQC protocol, quarterly and downtime reporting, and recordkeeping.

**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY  
ENFORCEABLE REQUIREMENTS**

**STATE-ONLY**

Registration No.: 3-0015, 3-0016

Emissions Unit No.: FSC-BS-Unit 1 and FSC-BS-Unit 2 General Reference: COMAR 26.11.09.05C

**and D**

**Briefly describe the requirement and the emissions limit (if applicable):**

The Permittee may discontinue the operation of the COM on fuel burning equipment that is served by a flue gas desulfurization device if the requirements in COMAR 26.11.09.05C(1)-(4) are met. If, for units equipped with a flue gas desulfurization device, emissions bypass the device and are discharged through a bypass stack, the bypass stack shall be equipped with a COM approved by the Department.

**Method used to demonstrate compliance:**

Proper operation of the flue gas desulfurization device and monthly Method 9 observations.

**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY  
ENFORCEABLE REQUIREMENTS**

**STATE-ONLY**

Registration No.: 5-0489, 3-0017, 3-0003, 4-0017

Emissions Unit No.: FSC-HAW-Unit 1, FSC-HAW-Unit 3, and FSC-HAW-Unit 4 General Reference:

COMAR 26.11.09.05A(4), COMAR 26.11.09.05B

**Briefly describe the requirement and the emissions limit (if applicable):**

Determining Violations.

(1) For each unit required to operate a COM pursuant to COMAR 26.11.01.10A(1)(a) and (b), each day during a calendar quarter when the opacity of emissions from that unit during the calendar quarter or calendar day, as applicable, exceeds the emission limitations in §A(4)(a), (b), (c) and (d) of this regulation shall constitute a separate day of violation.

(2) A violation of §A(4)(a)(i), (ii), or (iii), §A(4)(b)(i), (ii) or (iii), §A(4)(c)(i), (ii) or (iii), or §A(4)(d)(i), (ii) or (iii), of this regulation, as applicable, that occur on the same day shall constitute separate violations.

(3) A daily violation that occurs during the same calendar quarter as a quarterly violation is a separate violation.

**Method used to demonstrate compliance:**

**COMAR 26.11.09.05A(4). Fuel Burning Equipment Required to Operate a COM.**

The owner or operator of fuel burning equipment that is subject to the requirement to install and operate a COM shall demonstrate compliance with the applicable visible emissions limitation specified in §A(1) and (2) of this regulation as follows:

(a) For units with a capacity factor greater than 25 percent, until December 31, 2009, compliance is achieved if visible emissions do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4 percent of the unit's operating time in any calendar quarter, during which time visible emissions:

- (i) Do not exceed 40.0 percent opacity, except for 5.0 hours or 0.5 percent of the unit's operating time, whichever is greater;
- (ii) Do not exceed 70.0 percent opacity for more than four (4) 6-minute periods, except that coal-fired units equipped with electrostatic precipitators may exceed 70.0 percent opacity for no more than 2.2 hours; and
- (iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible

emissions do not exceed 40.0 percent opacity for more than 1.4 hours and do not exceed 70.0 percent opacity for more than two (2) six-minute periods;

(b) For units with a capacity factor greater than 25 percent, beginning January 1, 2010, compliance is achieved if visible emissions do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 2 percent of the unit's operating time in any calendar quarter, during which time visible emissions:

(i) Do not exceed 40.0 percent opacity, except for 5.0 hours or 0.5 percent of the unit's operating time, whichever is greater;

(ii) Do not exceed 70.0 percent opacity for more than four (4) six-minute periods, except that coal-fired units equipped with electrostatic precipitators may exceed 70.0 percent opacity for no more than 2.2 hours; and

(iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than 1.4 hours and do not exceed 70.0 percent opacity for more than two 6-minute periods;

(c) For units with a capacity factor equal to or less than 25 percent that operate more than 300 hours per quarter, beginning July 1, 2009, compliance with the applicable visible emissions limitation in §A(1) and (2) of this regulation is achieved if, during a calendar quarter, visible emissions do not exceed the applicable standard for more than 20.0 hours, during which time visible emissions:

(i) Do not exceed 40.0 percent opacity for more than 2.2 hours;

(ii) Do not exceed 70 percent for more than four 6-minute periods; and

(iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than 1.4 hours and do not exceed 70.0 percent opacity for more than two 6-minute periods; and

(d) For units with a capacity factor equal to or less than 25 percent that operate less than 300 hours per quarter, beginning July 1, 2009, compliance with the applicable visible emissions limitation in §A(1) and (2) of this regulation is achieved if, during a calendar quarter, visible emissions do not exceed the applicable standard for more than 12.0 hours, during which time visible emissions:

(i) Do not exceed 40.0 percent opacity for more than 2.2 hours;

(ii) Do not exceed 70.0 percent opacity for more than four 6-minute periods; and

(iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than 1.4 hours and do not exceed 70.0 percent opacity for more than two 6-minute periods.

**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY  
ENFORCEABLE REQUIREMENTS**  
**STATE-ONLY**

Registration No.: 5-0489, 4-0017

Emissions Unit No.: FSC-HAW-Unit 1, FSC-HAW-Unit 4 General Reference: COMAR 26.11.09.10B

**Briefly describe the requirement and the emissions limit (if applicable):**

Note: Requirement applies when burning used oil for energy recovery:

The Permittee shall determine that used oil that is to be burned for energy recovery meets the fuel specifications of COMAR 26.11.09.10B by performing analyses or obtaining copies of analyses or other information documenting that the used oil fuel meets the specifications.

**Method used to demonstrate compliance:**

The Permittee shall keep copies of analyses of the used oil (or other information used to make the determination) for three years.

**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY  
ENFORCEABLE REQUIREMENTS**  
**STATE-ONLY**

Registration No.: 3-0015, 3-0016, 3-0003

Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2, FSC-HAW-Unit 3

General Reference: COMAR 26.11.27.03B(7)(iii)

**Briefly describe the requirement and the emissions limit (if applicable):**

Not later than December 31 of the year in which the emission limitation is exceeded, the owner or operator of the affected generating unit or units transfers to the Maryland Environmental Surrender Account, ozone season NO<sub>x</sub> allowances equivalent in number to the tons of NO<sub>x</sub> emitted in excess of the emission limitation in §B(4) or (6), as applicable.

**Method used to demonstrate compliance:**

If required, the Permittee will transfer the allowances as required in the regulation.



**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY  
ENFORCEABLE REQUIREMENTS**

**STATE-ONLY**

Registration No.: 3-0015, 3-0016, 3-0003

Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2, FSC-HAW-Unit 3

General Reference: COMAR 26.11.27.03D

**Briefly describe the requirement and the emissions limit (if applicable):**

Mercury Emission Limitations.

- (1) For the 12 months beginning January 1, 2010 and ending with the 12 months beginning December 1, 2012 to December 1, 2013, each affected facility shall meet 12-month rolling average removal efficiency for mercury of at least 80 percent.
- (2) For the 12 months beginning January 1, 2013 and thereafter, each affected facility shall meet 12-month rolling average removal efficiency for mercury of at least 90 percent.
- (3) The mercury removal efficiency required in §D(1) and (2) of this regulation shall be determined in accordance with Regulation .04 of this chapter.

**Method used to demonstrate compliance:**

COMAR 26.11.27.04 - Determining the Mercury Removal Efficiency for Affected Facilities.

A. The procedures of §§B—F of this regulation shall be used to demonstrate compliance with the 12-month rolling average removal efficiency required for mercury by Regulation .03D of this chapter. The owner or operator of an affected facility shall notify the Department of the compliance demonstration method it has elected from §§D—F of this regulation on or before January 1, 2010, for the compliance period that commences on that date and on or before January 1, 2013, for the compliance period that commences on that date. The owner or operator of an electric generating unit that elects to demonstrate compliance with the required mercury removal efficiency by meeting the mass emissions limitation in §F of this regulation shall utilize that same method for all other electric generating units in the system. Once elected for each affected facility or system, as applicable, the option may not be changed during the designated compliance period, but may be changed for the next compliance period.

Note: Fort Smallwood Complex selected demonstrating compliance by Meeting a Mercury Mass Emission Cap COMAR 26.11.27.04F(1) and (2) per letter signed by Edwin Much to Ralph Hall dated December 7, 2009.

COMAR 26.11.27.04F(1) thru (5). Demonstrating Compliance by Meeting a Mercury Mass Emission Cap.

(1) Compliance with the required mercury removal efficiency is demonstrated at an affected facility when the mass emissions from all affected facilities in a system, measured in pounds as a 12-month rolling average, do not exceed the applicable emission limits in §F(2) of this regulation.

(2) Mercury Emission Limits.

Affected Facility	Emission Limits Pounds per Year
	Beginning January 1, 2013
Brandon Shores	46
Wagner	33*

\* Limit is based on current Title V permit and Maryland SIP; however, this limit will likely change based on the change in boiler classification/fuel type of Wagner Unit 2.

(3) In the event that an electric generating unit at an affected facility subject to this chapter permanently ceases operation, the mass emission limitation in §F(2) of this regulation which is applicable to that affected facility shall be reduced proportionally based on the relative capacity, in megawatts, of all the electric generating units at the affected facility which are subject to this regulation.

(4) In the event that an entire affected facility within a system permanently ceases operation, the total mass emission limitation in §F(2) which is applicable to the system shall be reduced by the mass emission limitation applicable to the affected facility.

(5) Except during periods of startup, shutdown, malfunction or maintenance, the owner or operator of an electric generating unit shall ensure that mercury control measures are continuously employed on each unit and properly adjusted for optimal control taking into consideration the operating conditions.

COMAR 26.11.27.05 - Monitoring and Reporting Requirements.

A. Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.

(B) Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.

(C) Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department.

**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY  
ENFORCEABLE REQUIREMENTS**

**STATE-ONLY**

Registration No.: 6-1143, 6-1144

Emissions Unit No.: FSC-BS-MH, FSC-HAW-MH

General Reference: COMAR 26.04.10.03B(3), (4)

**Briefly describe the requirement and the emissions limit (if applicable):**

**Air Pollution**

(a) A person may not engage in the disposal, storage, transportation, processing, handling, or use of coal combustion byproducts without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, when appropriate as determined by the Department, those precautions described in COMAR 26.11.06.03C and D."

(b) In addition to the requirements of paragraph (a), a person may not transport coal combustion byproducts without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, at a minimum the following:

- (i) Vehicles transporting coal combustion byproducts shall be fully enclosed, or fully enclosed on all sides and covered with a firmly secured canvas or similar type covering, so as to prevent any coal combustion byproducts from blowing off, falling off, or spilling out of the vehicle or the coal combustion byproducts shall be handled and transported in sealed containers designed for transportation of powdery solids;
- (ii) Before leaving a site where coal combustion byproducts are loaded or off-loaded, vehicles transporting coal combustion byproducts shall be rendered clean and free of excess material or debris that could blow off, fall off, or spill during transport;
- (iii) Coal combustion byproducts being loaded into or off-loaded from a vehicle shall be sufficiently moistened or otherwise conditioned or contained to prevent particulate coal combustion byproducts from becoming airborne or causing fugitive air emissions; and
- (iv) Transporters of coal combustion byproducts shall maintain an inspection log that shall be maintained in each vehicle at all times during transport of coal combustion byproducts that shall certify compliance with the standards in this regulation .03B(3)(b)."

**Method used to demonstrate compliance:**

Coal combustion byproducts are stored, disposed of, transported, processed, handled and used in accordance with the requirements in the regulation.

**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY  
ENFORCEABLE REQUIREMENTS**

**STATE-ONLY**

Registration No.: 6-1143, 6-1144

Emissions Unit No.: FSC-BS-MH, FSC-HAW-MH

General Reference: COMAR 26.04.10.05

**Briefly describe the requirement and the emissions limit (if applicable):**

**Storage**

- A. A person may not store coal combustion byproducts except in accordance with the provisions of this regulation.
- B. A person may not store coal combustion byproducts directly on the surface of the ground or in an unlined surface impoundment, pit, pond, or lagoon without the authorization of the Department.
- C. A person shall store coal combustion byproducts in a manner that prevents contact with waters of this State and that is designed either to minimize contact with precipitation or to collect leachate that may result from contact with precipitation.
- D. A person may not use a storage system for coal combustion byproducts unless the storage system is:
  - (1) Designed, constructed, and installed to contain coal combustion byproducts and contaminants in the coal combustion byproducts and prevent them from being released to the environment; and
  - (2) Provided with a roof or other protections to prevent nuisance, air pollution, and unlawful discharges of contaminated stormwater or leachate to the waters of this State.
- E. A person may not store coal combustion byproducts in an area likely to pollute the waters of this State.
- F. Responsibility for the prompt control, containment, and removal of any released coal combustion byproducts or for placing coal combustion byproducts in a position likely to pollute the waters of this State shall be with the person responsible for the release, and with the owner and operator of the facility, site, or storage system where the release occurred. This responsibility shall continue until removal or clean up of any contamination or pollution from the release has been accomplished to the satisfaction of the Department.
- G. The Department may impose specific requirements for the storage of coal combustion byproducts upon a determination that storage of coal combustion byproducts has caused or is likely to cause a

discharge to the waters of the State, is a nuisance, or otherwise poses a threat to public health or the environment.

H. The owner and operator of a facility, site, or storage system shall ensure that:

- (1) A release of coal combustion byproducts during storage operations due to spilling or overflowing does not occur;
- (2) Adequate storage space is available to handle the volume of coal combustion byproducts generated and to be stored; and
- (3) Transfer, handling, and storage operations are performed in a manner that shall prevent, contain, and clean up spills of coal combustion byproducts."

**Method used to demonstrate compliance:**

Coal combustion byproducts are stored, disposed of, transported, processed, handled and used in accordance with the requirements in the regulation.

**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY  
ENFORCEABLE REQUIREMENTS**  
**STATE-ONLY**

Registration No.: 6-1143, 6-1144

Emissions Unit No.: FSC-BS-MH and FSC-HAW-MH

General Reference: COMAR 26.11.15.05, COMAR 26.11.15.06

**Briefly describe the requirement and the emissions limit (if applicable):**

**COMAR 26.11.15.05**, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T-BACT) to control emissions of toxic air pollutants.

**COMAR 26.11.15.06**, which prohibits the discharge of toxic air pollutants to the extent that such emissions would unreasonably endanger human health.

**Method used to demonstrate compliance:**

Coal is stored, disposed of, transported, processed, handled and used in accordance with the requirements in the regulation and in order to meet the state TAPs program.

**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY  
ENFORCEABLE REQUIREMENTS**

**STATE-ONLY**

Registration No.: N/A

Emissions Unit No.: FSC-BS-EG

General Reference: COMAR 26.11.36

**Briefly describe the requirement and the emissions limit (if applicable):**

Compliance with the federal regulations is considered compliance with the Distributed Generation requirements under COMAR 26.11.36.

**Method used to demonstrate compliance:**

The Permittee maintains and reviews records compliance with the applicable requirements for the emergency generator.

**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY  
ENFORCEABLE REQUIREMENTS**

**STATE-ONLY**

Registration No.: 3-0015, 3-0016, 3-0003

Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2, FSC-HAW-Unit 3

General Reference: COMAR 26.11.38.03-6

**Briefly describe the requirement and the emissions limit (if applicable):**

Electric generating units shall meet the requirements in COMAR 26.11.38 Control of NOx Emissions from Coal-Fired Electric Generating Units.

**Method used to demonstrate compliance**

The Permittee will demonstrate compliance with the requirements including, but not limited to, the use of a CEMS to demonstrate compliance with the emissions limit, operation of pollution control technology to reduce NOx emissions, implementation of a plan to meet the requirements in COMAR, and recordkeeping/reporting requirements.



**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY  
ENFORCEABLE REQUIREMENTS**  
**STATE-ONLY**

Registration No.: Facility-Wide

Emissions Unit No.: Facility-Wide      General Reference: COMAR 26.11.15 & 16

**Briefly describe the requirement and the emissions limit (if applicable):**

The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis should include either:

- (i) A statement that previously submitted compliance demonstrations from emissions of toxic air pollutants remain valid; or
- (ii) A revised compliance demonstration developed in accordance with requirements included under COMAR 26.11.15 & 16 that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

**Method used to demonstrate compliance:**

The Permittee will review the annual emissions certification report and include a certification of the TAP's analysis.

**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY  
ENFORCEABLE REQUIREMENTS**  
**STATE-ONLY**

Registration No.: 3-0015, 3-0016, 5-0489, 3-0017, 3-0003, 4-0017

Emissions Unit No.: FSC-BS-Unit 1, FSC-BS-Unit 2, FSC-HAW-Unit 1, FSC-HAW-  
Unit 2, FSC-HAW-Unit 3, and FSC-HAW-Unit 4

General Reference: Consent Agreement signed December 4, 2019

**Briefly describe the requirement and the emissions limit (if applicable):**

Raven Power is required to remain in compliance with SO<sub>2</sub> emissions limitations as specified in the Consent Agreement signed December 4, 2019.

**Method used to demonstrate compliance:**

The Permittee will demonstrate compliance through quarterly reports utilizing calculation methodologies, continuous emissions monitoring system (CEMS) availability requirements, and a report format approved by the Department. The Permittee shall submit each quarterly report within 30 days of the end of the applicable quarter.

## **APPENDIX B. INSIGNIFICANT AND EXEMPT ACTIVITIES**

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**III. Check-off List of Emissions Units and Activities Exempt from the Part 70 Permit Application**

**Insignificant Activities**

Place a check mark beside each type of emissions unit or activity that is located at the facility. Where noted, please indicate the number of that type of emissions unit or activity located at the facility.

- (1) No. \_\_\_ Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;
- (2) No. \_\_\_ Fuel-burning equipment using solid fuel and having a heat input of less than 350,000 Btu (0.37 gigajoule) per hour;
- (3) No. 4 Stationary internal combustion engines with less than 500 brake horsepower (373 kilowatts) of power output
- (4) \_\_\_ Space heaters utilizing direct heat transfer and used solely for comfort heat;
- (5) X Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;
- (6) No. 2 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;
- (7) \_\_\_ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;
- (8) \_\_\_ Kilns used for firing ceramic ware, heated exclusively by natural gas, liquefied petroleum gas, electricity, or any combination of these;
- (9) \_\_\_ Confection cookers where the products are edible and intended for human consumption;
- (10) \_\_\_ Die casting machines;
- (11) \_\_\_ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;
- (12) \_\_\_ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

- (13) \_\_\_ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;
- (14) \_\_\_ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;
- (15) \_\_\_ Containers, reservoirs, or tanks used exclusively for electrolytic plating work, or electrolytic polishing, or electrolytic stripping of brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals;
- (16) Containers, reservoirs, or tanks used exclusively for:
- (a) \_\_\_ Dipping operations for applying coatings of natural or synthetic resins that contain no VOC;
  - (b) \_\_\_ Dipping operations for coating objects with oils, waxes, or greases, and where no VOC is used;
  - (c) \_\_\_ Storage of butane, propane, or liquefied petroleum, or natural gas;
  - (d) No. 16 Storage of lubricating oils;
  - (e) No. \_\_\_ Unheated storage of VOC with an initial boiling point of 300 °F
  - (f) No. 13 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel,
  - (g) No. 1 Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;
  - (h) No. \_\_\_ The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;
- (17) \_\_\_ Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;

- (18) Crucible furnaces, pot furnaces, or induction furnaces, with individual capacities of 1,000 pounds (454 kilograms) or less each, in which no sweating or distilling is conducted, or any fluxing is conducted using chloride, fluoride, or ammonium compounds, and from which only the following metals are poured or in which only the following metals are held in a molten state:
- (a) \_\_\_ Aluminum or any alloy containing over 50 percent aluminum, if no gaseous chloride compounds, chlorine, aluminum chloride, or aluminum fluoride is used;
  - (b) \_\_\_ Magnesium or any alloy containing over 50 percent magnesium;
  - (c) \_\_\_ Lead or any alloy containing over 50 percent lead;
  - (d) \_\_\_ Tin or any alloy containing over 50 percent tin;
  - (e) \_\_\_ Zinc or any alloy containing over 50 percent zinc;
  - (f) \_\_\_ Copper;
  - (g) \_\_\_ Precious metals;
- (19) X Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;
- (20) \_\_\_ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (21) \_\_\_ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (22) \_\_\_ Potable water treatment equipment, not including air stripping equipment;
- (23) \_\_\_ Firing and testing of military weapons and explosives;
- (24) \_\_\_ Emissions resulting from the use of explosives for blasting at quarrying operations and from the required disposal of boxes used to ship the explosive;
- (25) X Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (26) \_\_\_ Grain, metal, or mineral extrusion presses;
- (27) \_\_\_ Breweries with an annual beer production less than 60,000 barrels;

(28) \_\_\_ Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;

(29) X Laboratory fume hoods and vents;

(30) No. \_\_\_ Sheet-fed letter or lithographic printing press(es) with a cylinder width of less than 18 inches;

*For the following, attach additional pages as necessary:*

(31) any other emissions unit, not listed in this section, with a potential to emit less than the “de minimus” levels listed in COMAR 26.11.02.10X (list and describe units):

No. 2 sandblasting booth

No. \_\_\_

No. \_\_\_

No. \_\_\_

No. \_\_\_

(32) any other emissions unit at the facility which is not subject to an applicable requirement of the Clean Air Act (list and describe):

No. \_\_\_

No. \_\_\_

No. \_\_\_

## APPENDIX C. COMPLIANCE ASSURANCE MONITORING (CAM) PLANS

As required under 40 CFR Part 64, the Fort Smallwood Complex is submitting Compliance Assurance Monitoring (CAM) Plans for applicable larger emission units who rely on air pollution control devices to achieve compliance. A CAM Plan is required for an emission unit meeting the following criteria:

- ▶ Emission unit is located at a major source subject to a Part 70 permit
- ▶ Emission unit is subject to an emission standard
- ▶ Emission unit uses a control device to achieve compliance
- ▶ Pre-control potential emissions from the emission unit is at least 100% of the major source threshold
- ▶ Emission unit is not otherwise exempt from CAM

The table below details the applicability of the CAM regulations to the emission units at the Fort Smallwood Complex.

Emission Unit	Pollutant	Control Device	CAM Applicability
FSC-BS-Unit 1	PM	ESP, Baghouse	PM CEMS; exempt from CAM per 40 CFR 64.2(b)(1)(vi)
	NO <sub>x</sub>	SCR	NO <sub>x</sub> CEMS; exempt from CAM per 40 CFR 64.2(b)(1)(vi)
FSC-BS-Unit 2	SO <sub>2</sub>	FGD, Hydrated Lime or Equivalent	SO <sub>2</sub> CEMS; exempt from CAM per 40 CFR 64.2(b)(1)(vi)
	Hg	PAC Injection	Hg CEMS; exempt from CAM per 40 CFR 64.2(b)(1)(vi)
FSC-BS-AuxBlr1	All	None	Not Applicable
FSC-BS-AuxBlr2	All	None	Not Applicable
FSC-BS-MH	All	Baghouses	Not Applicable (pre-control emissions less than major source threshold)
FSC-BS-LSH	All	Baghouses	Not Applicable (pre-control emissions less than major source threshold)
FSC-BS-GH	All	Baghouses	Not Applicable (pre-control emissions less than major source threshold)
FSC-HAW-MH	All	Baghouses	Not Applicable (pre-control emissions less than major source threshold)
FSC-BS-QP	All	None	Not Applicable
FSC-HAW-Unit 1	PM	ESP	Applicable
FSC-HAW-Unit 2	NO <sub>x</sub>	SNCR	NO <sub>x</sub> CEMS; exempt from CAM per 40 CFR 64.2(b)(1)(vi)
	PM	ESP	Not Applicable (pre-control emissions less than major source threshold)
FSC-HAW-Unit 3	NO <sub>x</sub>	SNCR	NO <sub>x</sub> CEMS; exempt from CAM per 40 CFR 64.2(b)(1)(vi)



<b>Emission Unit</b>	<b>Pollutant</b>	<b>Control Device</b>	<b>CAM Applicability</b>
	Hg	PAC Injection, Hydrated Lime or Equivalent	Hg CEMs; exempt from CAM per 40 CFR 64.2(b)(1)(vi)
	PM	ESP	Applicable
FSC-HAW-Unit 4	PM	Multi-clone	Applicable

The proposed CAM Plans provided below are consistent with the current CAM Plans previously submitted, approved and incorporated into the permit. Please note that the requirements to develop and maintain a CAM Plan are no longer applicable for FSC-HAW-Unit 2 as burning natural gas has reduced pre-control potential emissions to less than the Title V major source threshold for particulate matter. As such, the CAM Plan for this unit has not been included with this application. For each control device required to have a CAM Plan as detailed in the table above, a CAM Plan is proposed below.

## CAM Plan #1 - FSC-HAW-Unit 1 (No. 6 Fuel Oil Firing Only)

### Background

**Emission Units:** FSC-HAW-Unit 1

**Applicable Regulations:** COMAR 26.11.09.06(B)(2)

**Emission Limits:** 0.03 gr/scfd at 50% excess air

**Monitoring Requirements:** Maintain Continuous Opacity Monitor (COM), Monitor ESP Power Management Alarms

**Control Technology:** An ESP is used to control PM emissions

### Monitoring Approach – Continuous Opacity Monitor (COM)

Opacity data is measured and recorded by a certified opacity monitoring system.

#### A. General Criteria

- ▶ **Performance indicator(s):** Continuous Opacity Monitor (COM)
- ▶ **Indicator range(s) or designated condition(s):** An internal, non-enforceable trigger level of 10.2% average opacity is established as the Indicator Range. The unit operators will take corrective action when the trigger level is exceeded.

#### B. Performance Criteria

The COM meets the performance criteria for installation and operation as specified in COMAR 26.11.01.10, COMAR 26.11.0-1.11, and COMAR 26.11.31 and the more stringent requirements of the Acid Rain monitoring rules of 40 CFR Part 75.

- ▶ **Data representativeness:** COM data will be collected and validated in accordance with COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.
- ▶ **Verification of operational status (new or modified equipment):** COM data availability requirements are continuous data availability excluding audit and check periods and malfunctions that are corrected within two hours each day. CEM downtime up to 10% of operating time may initiate follow-up by MDE per COMAR 26.11.31.
- ▶ **QA/QC practices:** COM QA/QC procedures are consistent with the applicable requirements of COMAR 26.11.01.10, COMAR 26.11.01.11, and COMAR 26.11.31.
- ▶ **Monitoring Frequency:** Opacity is measured on a continuous basis with the exceptions of malfunction or periods when the fans are shut off and there is no flame in the boiler or during periods of start-up and shutdown. Data from the backup monitoring system and ESP power management system will be used to indicate normal ESP performance during QA/QC periods or monitor malfunctions.
- ▶ **Data Collection Procedures:** Opacity data is collected on a certified Data Acquisition System (DAS) and is archived for at least five years.
- ▶ **Averaging Period:** One-minute average data is collected and stored. Three hour block averages are calculated and stored based on the minute-by-minute data, for use as a compliance surrogate of Method 5 based in PM mass emission limits.

### Justification – Continuous Opacity Monitor (COM)

The source is a CAM applicable emission unit for which PM emissions are controlled using an ESP.

### **A. Rationale for monitoring approach and indicator**

Continuous opacity monitors (COMs) measure the visible emissions in stack gases. The use of a COM as an indicator for PM emissions is justified in that visible emissions are directly related to PM emissions, and can be considered an indicator for such emissions.

### **B. Rationale for use of indicator range(s)**

The indicator range was established at an opacity level that would indicate PM emissions are such that corrective action is necessary.

### **Monitoring Approach – ESP Alarm Monitoring (No. 6 Fuel Oil Firing Only)**

Operators oversee the ESP unit operation and will react as appropriate to control system alarms that indicate abnormal operation.

#### **A. General Criteria**

- ▶ **Performance indicator(s):** Malfunction of the Electrostatic Precipitator (ESP)
- ▶ **Indicator range(s) or designated condition(s):** ESP is normally operated with at least three fields in service. The activation of a control room alarm indicates possible operation of the ESP outside its normal operating conditions.

#### **B. Performance Criteria**

Normal operation of the ESP is continuously monitored.

- ▶ **Data representativeness:** The alarm points have been set within the distributed control system (DCS) to alert the operators of potential ESP malfunction.
- ▶ **Verification of operational status (new or modified equipment):** Continuous monitoring of the DCS will alert the operators of potential ESP malfunction.
- ▶ **QA/QC practices:** Calibration, maintenance, and operation of the ESP in accordance with good operating practice.
- ▶ **Monitoring Frequency:** Monitoring is ongoing so that alarm notifications are triggered whenever a potential malfunction occurs.
- ▶ **Data Collection Procedures:** The ESP operations are continually monitored. Hard copies of event data will be stored for five years.
- ▶ **Averaging Period:** So long as the ESP is being operated normally, the primary indicator (opacity) will be relied upon to indicate continuous compliance with the PM standard.

### **Justification – Continuous Opacity Monitor (COM)**

The source is a CAM applicable emission unit for which PM emissions are controlled using an ESP.

#### **A. Rationale for monitoring approach and indicator**

ESP control PM by using an electric charge to remove particulates from a stream of stack gas. Alarms associated with the function of the ESP will indicate whether the ESP is operating outside of its normal operating range.

#### **B. Rationale for use of indicator range(s)**

The indicator range was established based on a representative functionality alarm of the ESP. Set points of alarms will indicate to operators of a potential malfunction of the ESP so that corrective action may be taken.

## CAM Plan #2 - FSC-HAW-Unit 4 (No. 6 Fuel Oil Firing Only)

### Background

**Emission Units:** FSC-HAW-Unit 4

**Applicable Regulations:** COMAR 26.11.09.06(B)(2)

**Emission Limits:** 0.03 gr/scfd at 50% excess air

**Monitoring Requirements:** Maintain Continuous Opacity Monitor (COM)

**Control Technology:** A multicyclone is used to control PM emissions

### Monitoring Approach – Continuous Opacity Monitor (COM)

Opacity data is measured and recorded by a certified opacity monitoring system.

#### A. General Criteria

- ▶ **Performance indicator(s):** Continuous Opacity Monitor (COM)
- ▶ **Indicator range(s) or designated condition(s):** An internal, non-enforceable trigger level of 10.6% average opacity is established as the Indicator Range. The unit operators will take corrective action when the trigger level is exceeded.

#### B. Performance Criteria

The COM meets the performance criteria for installation and operation as specified in COMAR 26.11.01.10, COMAR 26.11.01.11, COMAR 26.11.31 and the more stringent requirements of the Acid Rain monitoring rules of 40 CFR Part 75.

- ▶ **Data representativeness:** COM data will be collected and validated in accordance with COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.
- ▶ **Verification of operational status (new or modified equipment):** COM data availability requirements are continuous data availability excluding audit and check periods and malfunctions that are corrected within two hours each day. CEM downtime up to 10% of operating time may initiate follow-up by MDE per COMAR 26.11.31.
- ▶ **QA/QC practices:** COM QA/QC procedures are consistent with the applicable requirements of COMAR 26.11.01.10, COMAR 26.11.01.11, and COMAR 26.11.31.
- ▶ **Monitoring Frequency:** Opacity is measured on a continuous basis with the exceptions of malfunction or periods when the fans are shut off and there is no flame in the boiler or during periods of start-up and shutdown.
- ▶ **Data Collection Procedures:** Opacity data is collected on a certified Data Acquisition System (DAS) and is archived for at least five years.
- ▶ **Averaging Period:** One-minute average data is collected and stored. Three hour block averages are calculated and stored based on the minute-by-minute data, for use as a compliance surrogate of Method 5 based in PM mass emission limits.

### Justification – Continuous Opacity Monitor (COM)

The source is a CAM applicable emission unit for which PM emissions are controlled using a multicyclone.

#### A. Rationale for monitoring approach and indicator

Continuous opacity monitors (COMs) measure the visible emissions in stack gases. The use of a COM as an indicator for PM emissions is justified in that visible emissions are a directly related to PM emissions, and can be considered an indicator for such emissions.

**B. Rationale for use of indicator range(s)**

The indicator range was established at an opacity level that would indicate PM emissions are such that corrective action is necessary.

## CAM Plan #3 - FSC-HAW-Unit 3

### Background

**Emission Units:** FSC-HAW-Unit 3

**Applicable Regulations:** COMAR 26.11.09.06(B)(3)

**Emission Limits:** 0.03 gr/scfd at 50% excess air

**Monitoring Requirements:** Maintain Continuous Opacity Monitor (COM), Monitor ESP Power Management Alarms

**Control Technology:** An ESP is used to control PM emissions

### Monitoring Approach – Continuous Opacity Monitor (COM)

Opacity data is measured and recorded by a certified opacity monitoring system.

#### A. General Criteria

- ▶ **Performance indicator(s):** Continuous Opacity Monitor (COM)
- ▶ **Indicator range(s) or designated condition(s):** An internal, non-enforceable trigger level of 15.4% average opacity is established as the Indicator Range. The unit operators will take corrective action when the trigger level is exceeded.

#### B. Performance Criteria

The COM meets the performance criteria for installation and operation as specified in COMAR 26.11.01.10, COMAR 26.11.01.11, COMAR 26.11.31 and the more stringent requirements of the Acid Rain monitoring rules of 40 CFR Part 75.

- ▶ **Data representativeness:** COM data will be collected and validated in accordance with COMAR 26.11.01.10, COMAR 26.11.01.11 and COMAR 26.11.31.
- ▶ **Verification of operational status (new or modified equipment):** COM data availability requirements are continuous data availability excluding audit and check periods and malfunctions that are corrected within two hours each day. CEM downtime up to 10% of operating time may initiate follow-up by MDE per COMAR 26.11.31.
- ▶ **QA/QC practices:** COM QA/QC procedures are consistent with the applicable requirements of COMAR 26.11.01.10, COMAR 26.11.01.11, and COMAR 26.11.31.
- ▶ **Monitoring Frequency:** Opacity is measured on a continuous basis with the exceptions of malfunction or periods when the fans are shut off and there is no flame in the boiler or during periods of start-up and shutdown. Data from the backup monitoring system and ESP power management system is used to indicate normal ESP performance during QA/QC periods or monitor malfunctions.
- ▶ **Data Collection Procedures:** Opacity data is collected on a certified Data Acquisition System (DAS) and is archived for at least five years.
- ▶ **Averaging Period:** One-minute average data is collected and stored. Three hour block averages are calculated and stored based on the minute-by-minute data, for use as a compliance surrogate of Method 5 based in PM mass emission limits.

### Justification – Continuous Opacity Monitor (COM)

The source is a CAM applicable emission unit for which PM emissions are controlled using an ESP.

### **A. Rationale for monitoring approach and indicator**

Continuous opacity monitors (COMs) measure the visible emissions in stack gases. The use of a COM as an indicator for PM emissions is justified in that visible emissions are directly related to PM emissions, and can be considered an indicator for such emissions.

### **B. Rationale for use of indicator range(s)**

The indicator range was established at an opacity level that would indicate PM emissions are such that corrective action is necessary.

### **Monitoring Approach – ESP Power Management Alarm**

Operators oversee the ESP unit operation and will react as appropriate to control system alarms.

#### **A. General Criteria**

- ▶ **Performance indicator(s):** Audible and visual alarm integrated with the power management system of the ESP.
- ▶ **Indicator range(s) or designated condition(s):** The activation of the alarm indicates possible operation of the ESP outside the normal operating conditions.

#### **B. Performance Criteria**

The operation of the power management system is continuously monitored.

- ▶ **Data Representativeness:** The alarm points are set to provide the operators with an early warning of potential ESP malfunction.
- ▶ **Verification of operational status (new or modified equipment):** Continuous monitoring will detect deviations from normal operating conditions of the power management system.
- ▶ **QA/QC practices:** Calibration, maintenance, and operation of the power management system in accordance with specifications.
- ▶ **Monitoring Frequency:** The power management system parameters will be monitored and recorded at least four times within each operating hour.
- ▶ **Data Collection Procedures:** The power management parameters are recorded using the power management system DAS and are electronically archived for at least 90 days, hardcopy of the event data will be stored for five years.
- ▶ **Averaging Period:** The power management alarm setting is set by the power management system OEM guidelines. So long as the ESP is being operated normally, the primary indicator (opacity) will be relied upon to indicate continuous compliance with the PM standard.

### **Justification – Continuous Opacity Monitor (COM)**

The source is a CAM applicable emission unit for which PM emissions are controlled using an ESP.

#### **A. Rationale for monitoring approach and indicator**

ESP control PM by using an electric charge to remove particulates from a stream of stack gas. The performance of the ESP is tied directly to the power management system of the unit. Alarms associated with the power management system would indicate a potential malfunction of the ESP

#### **B. Rationale for use of indicator range(s)**

The indicator range was established based on a representative functionality alarm of the ESP. Set points of the power management system alarms will indicate to operators of a potential malfunction of the ESP so that corrective action may be taken.

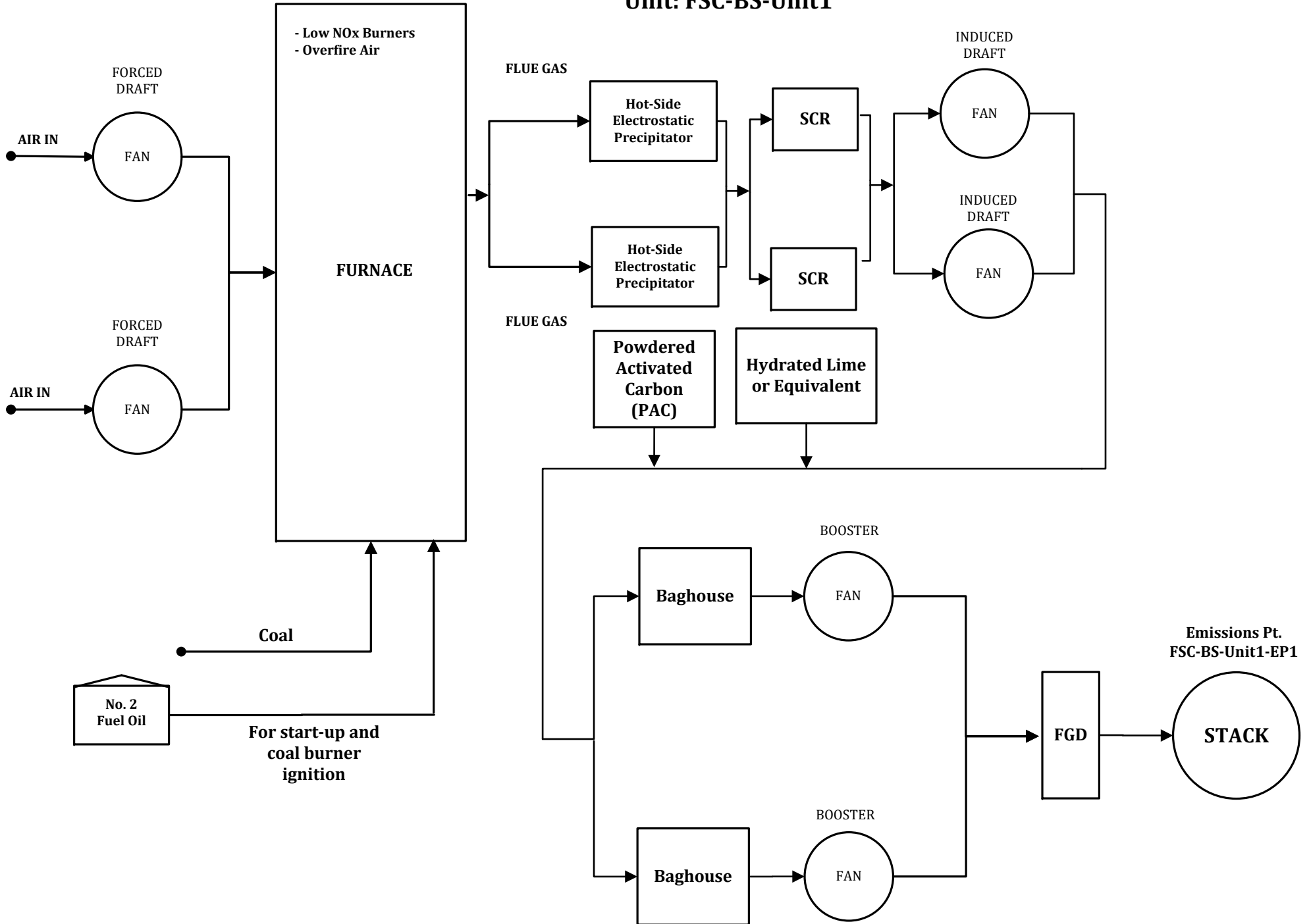
## APPENDIX D. FLOW DIAGRAMS

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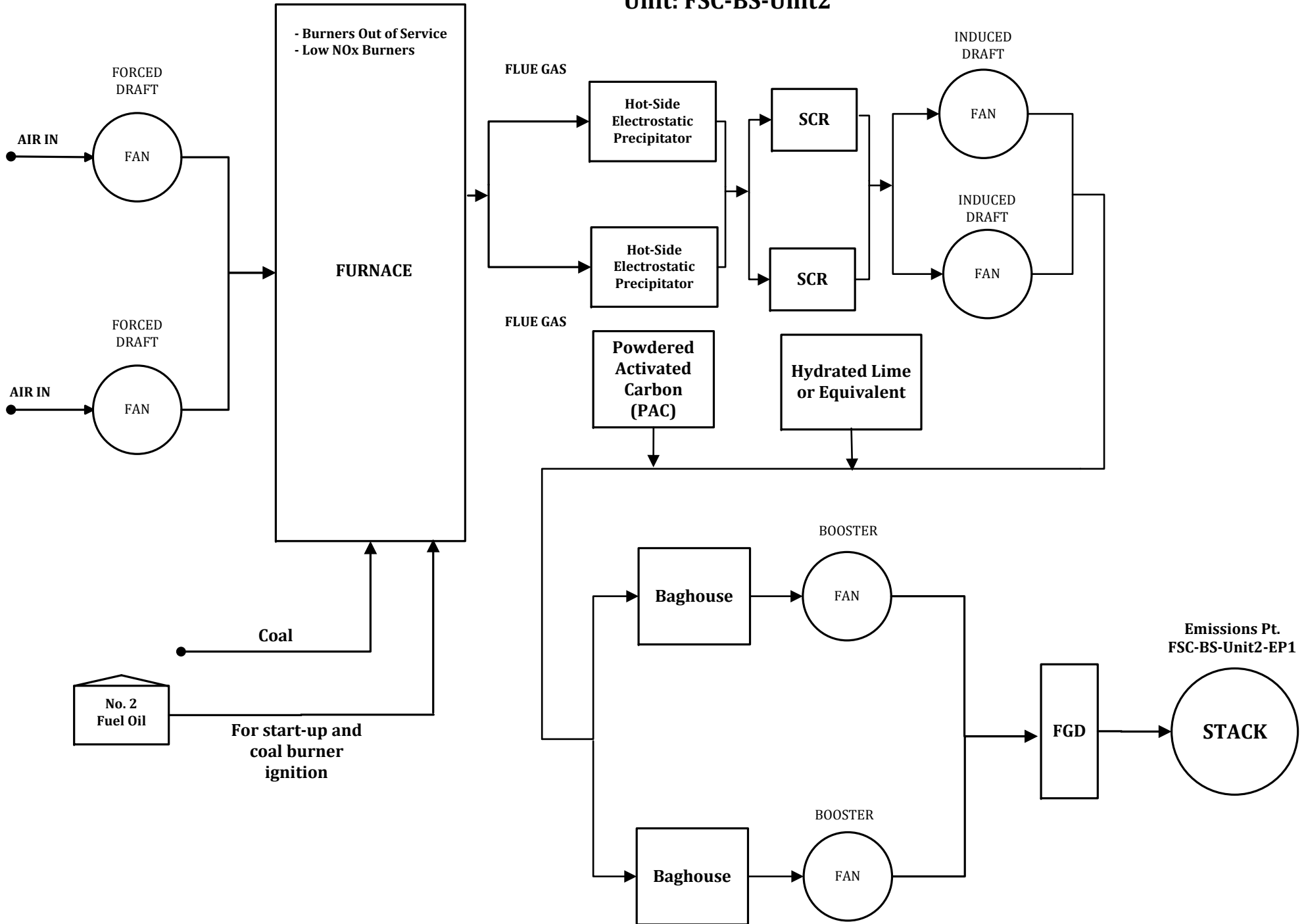
# Brandon Shores Unit 1 Emissions

## Unit: FSC-BS-Unit1

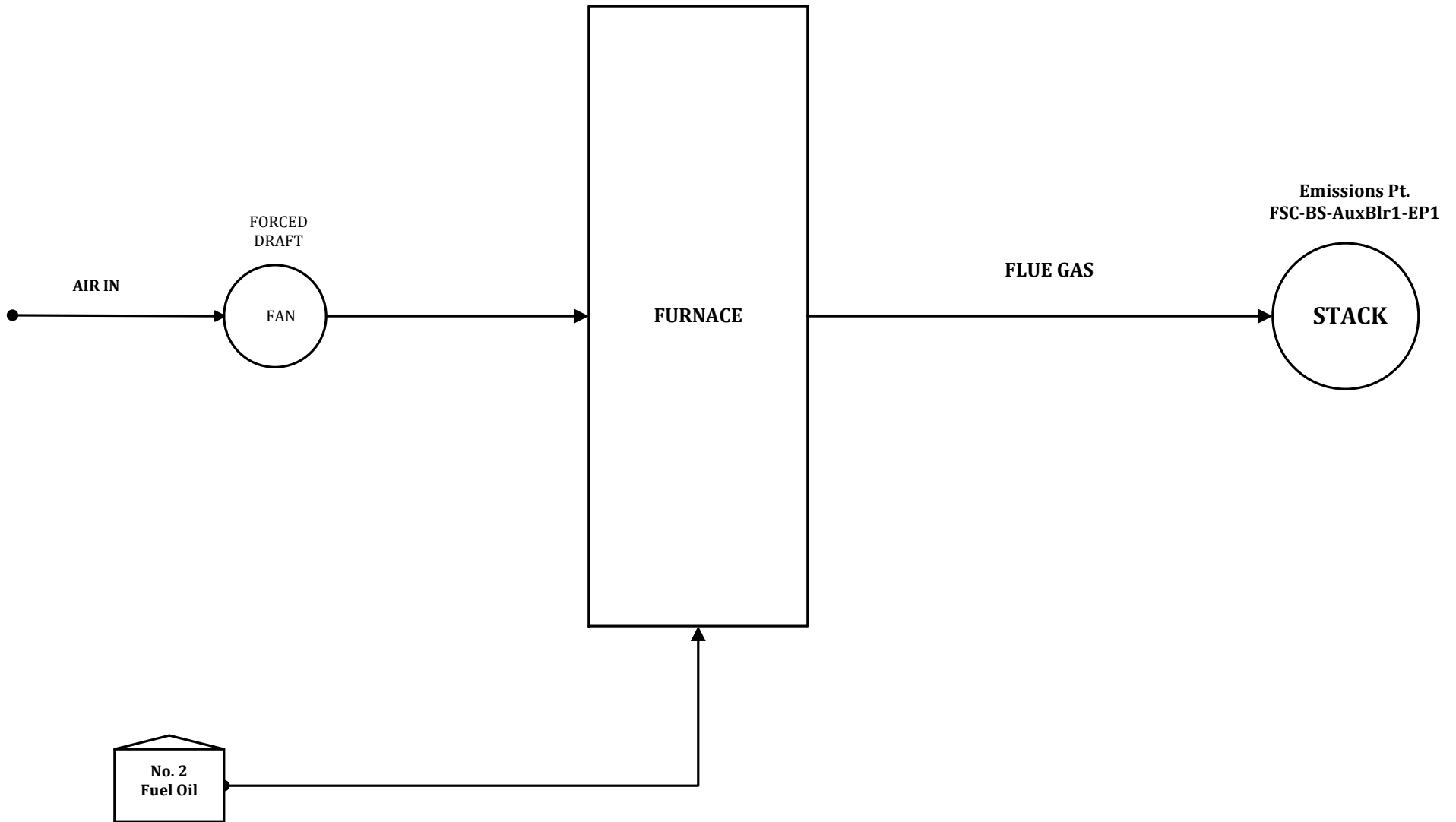


# Brandon Shores Unit 2 Emissions

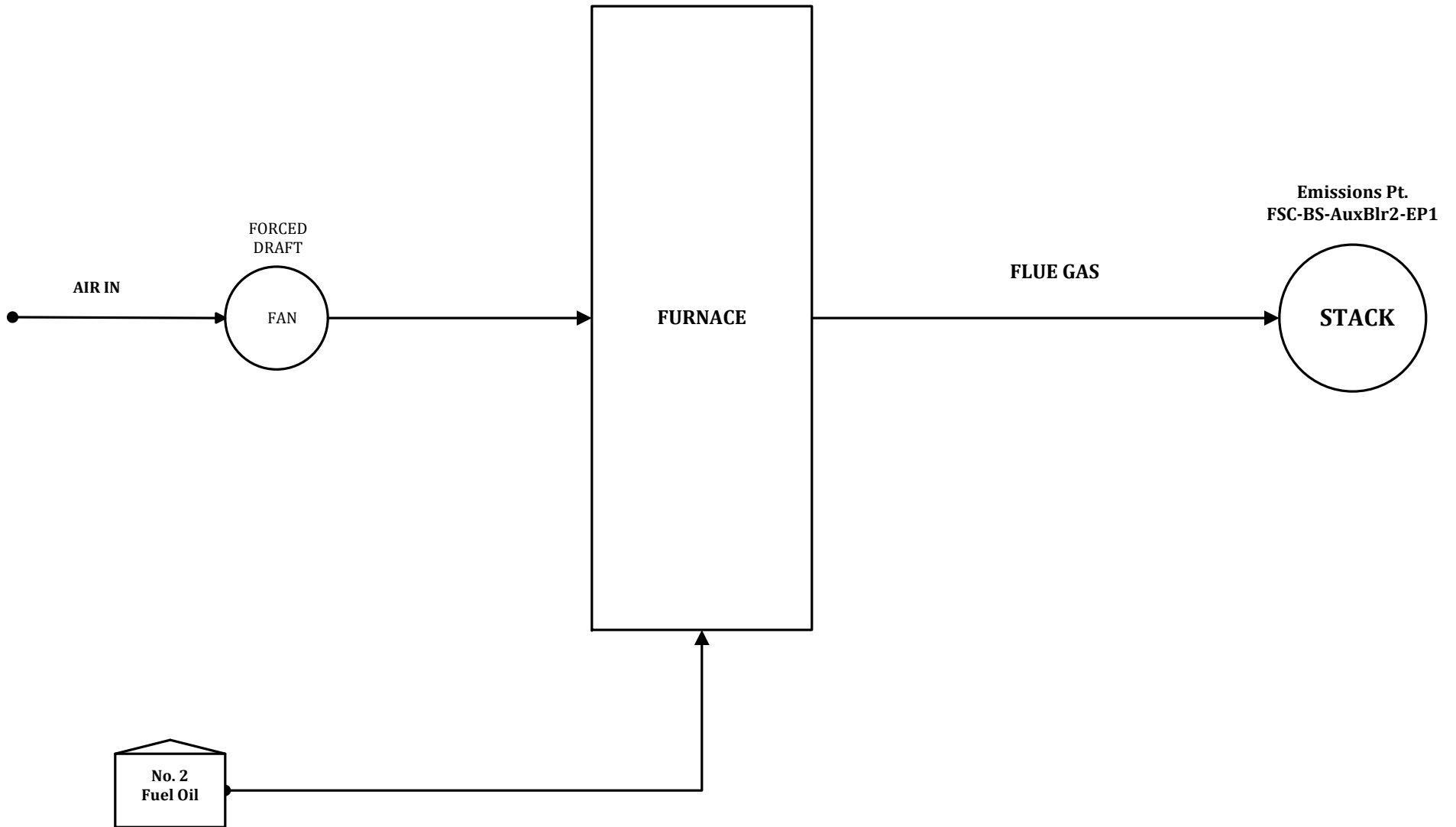
## Unit: FSC-BS-Unit2



**Brandon Shores Auxiliary Boiler 1 Emissions**  
**Unit: FSC-BS-AuxBlr1**

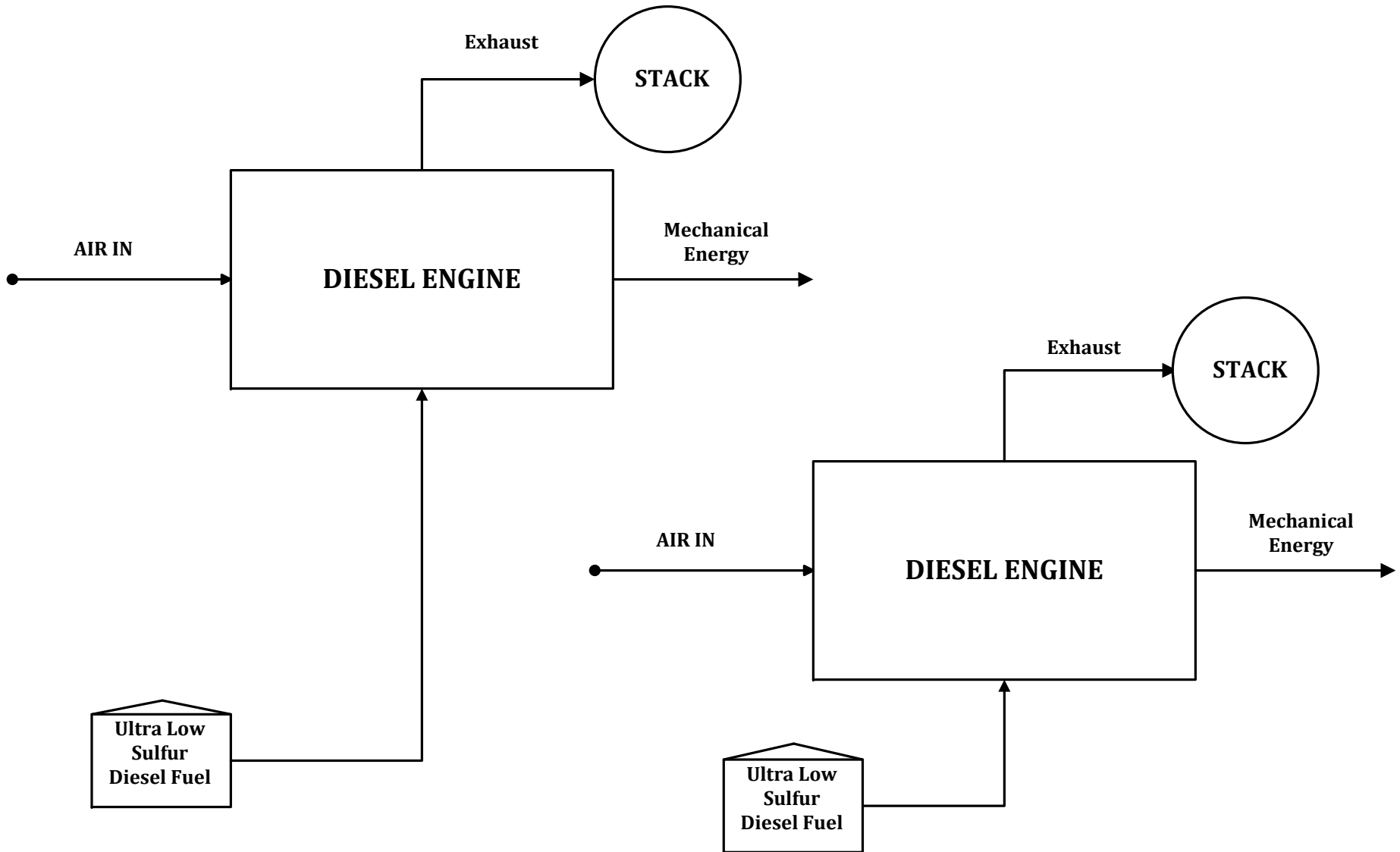


**Brandon Shores Auxiliary Boiler 2 Emissions**  
**Unit: FSC-BS-AuxBlr2**

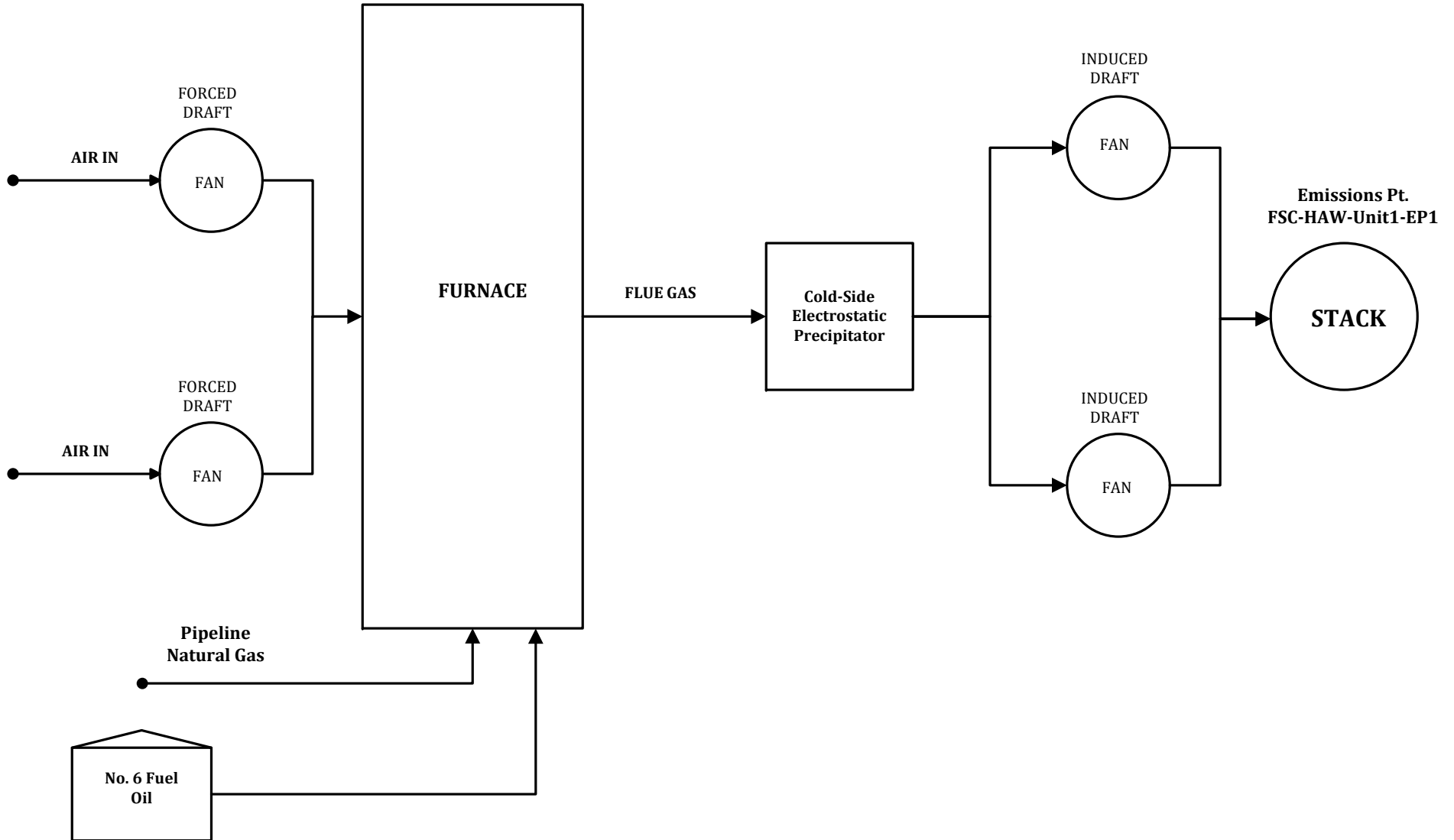


# Brandon Shores Quench Pumps Emissions

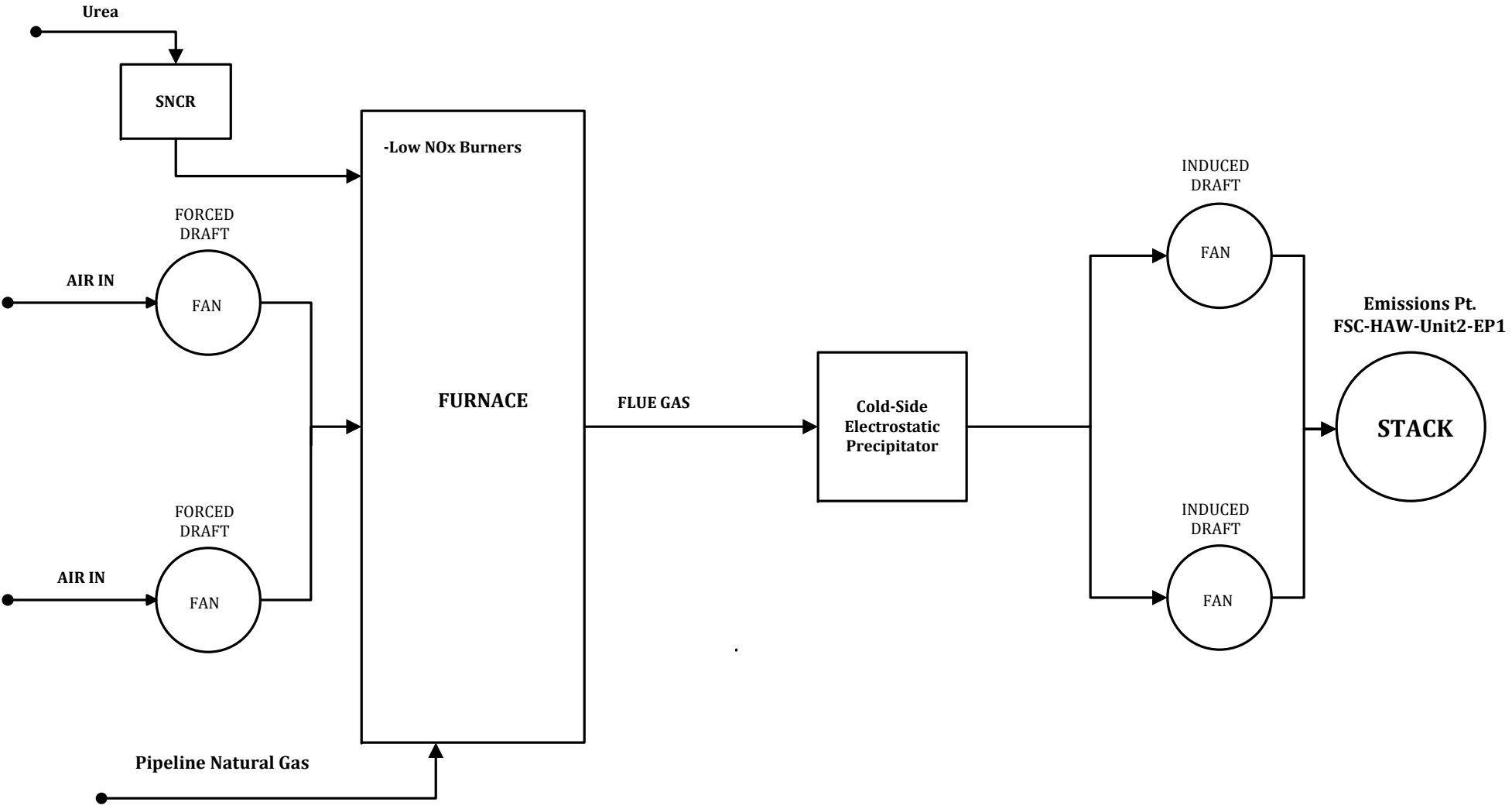
## Unit: FSC-BS-QP



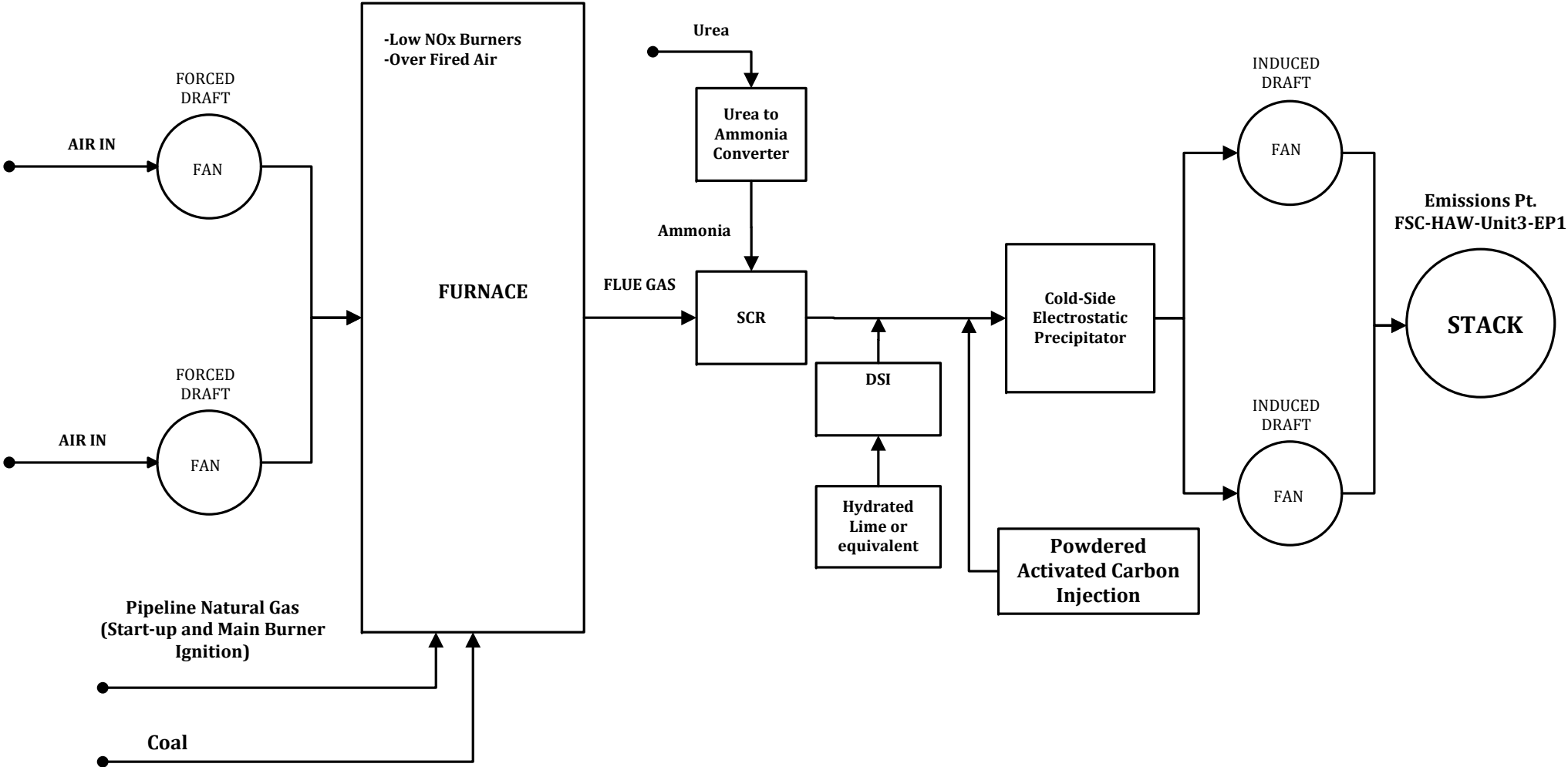
**H.A. Wagner Unit 1 Emissions  
Unit: FSC-HAW-Unit1**



**H.A. Wagner Unit 2 Emissions  
Unit: FSC-HAW-Unit2**



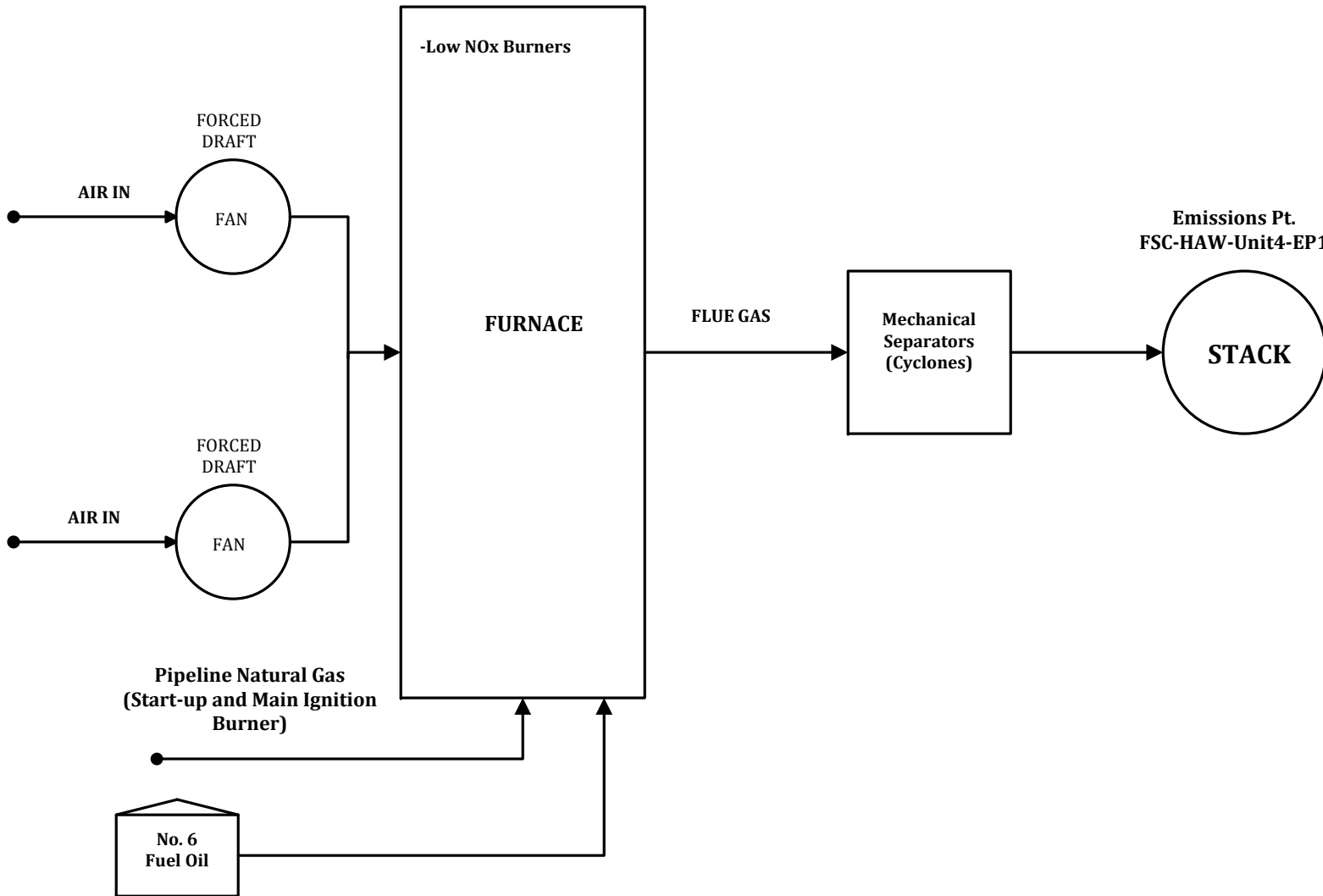
**H.A. Wagner Unit 3 Emissions  
Unit: FSC-HAW-Unit3**





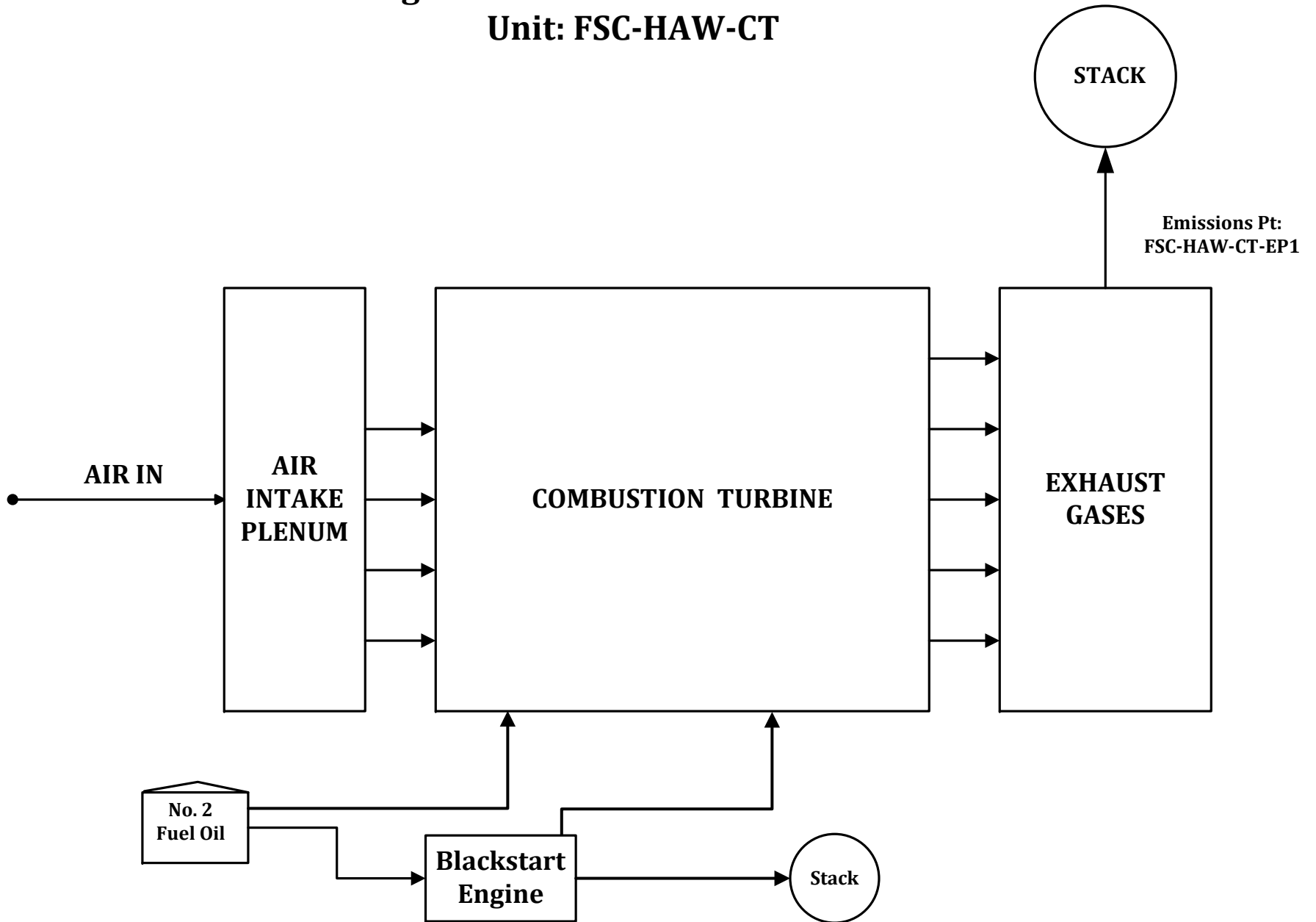
# H.A. Wagner Unit 4 Emissions

## Unit: FSC-HAW-Unit4



# H.A. Wagner Combustion Turbine Emissions

## Unit: FSC-HAW-CT

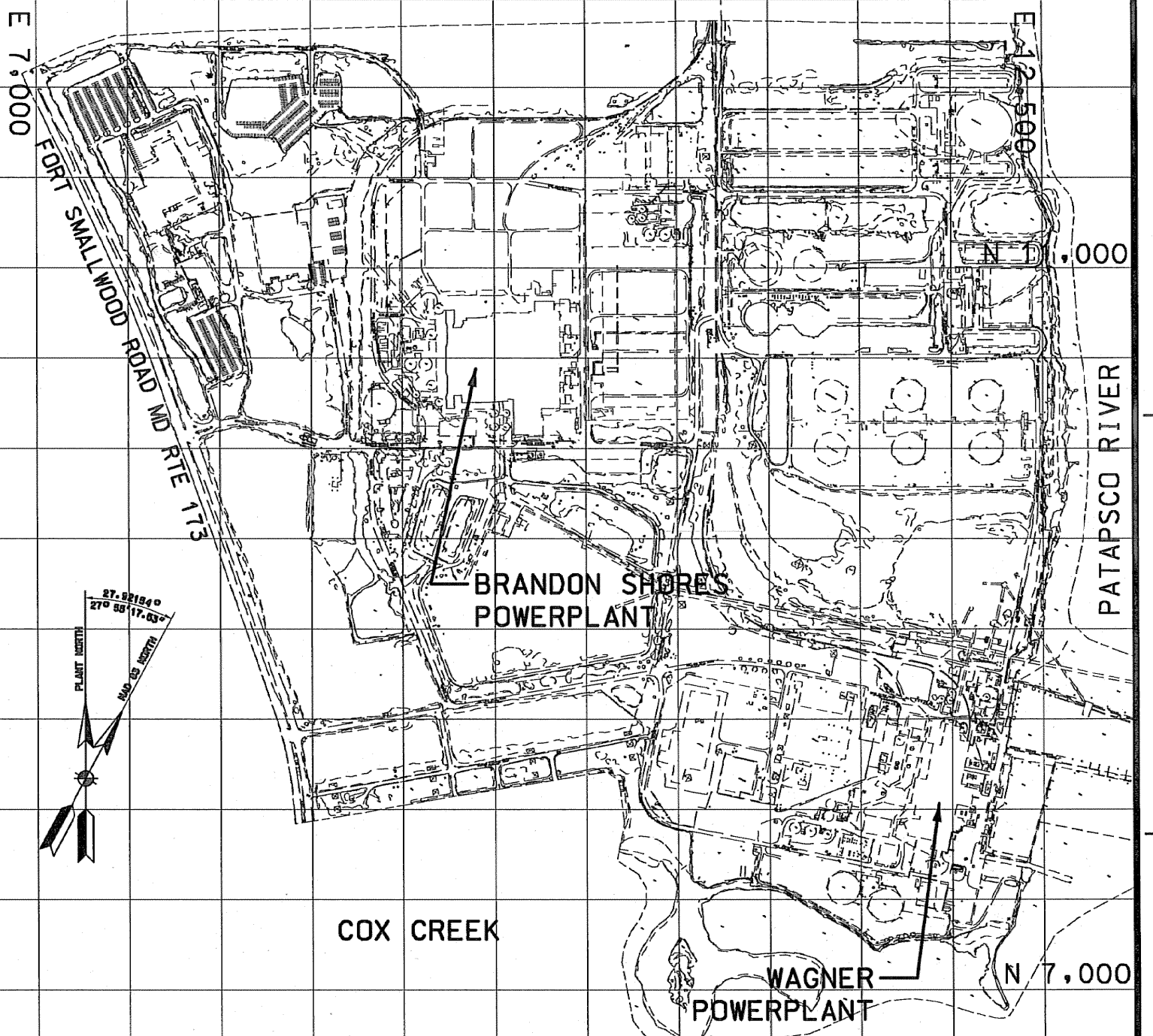
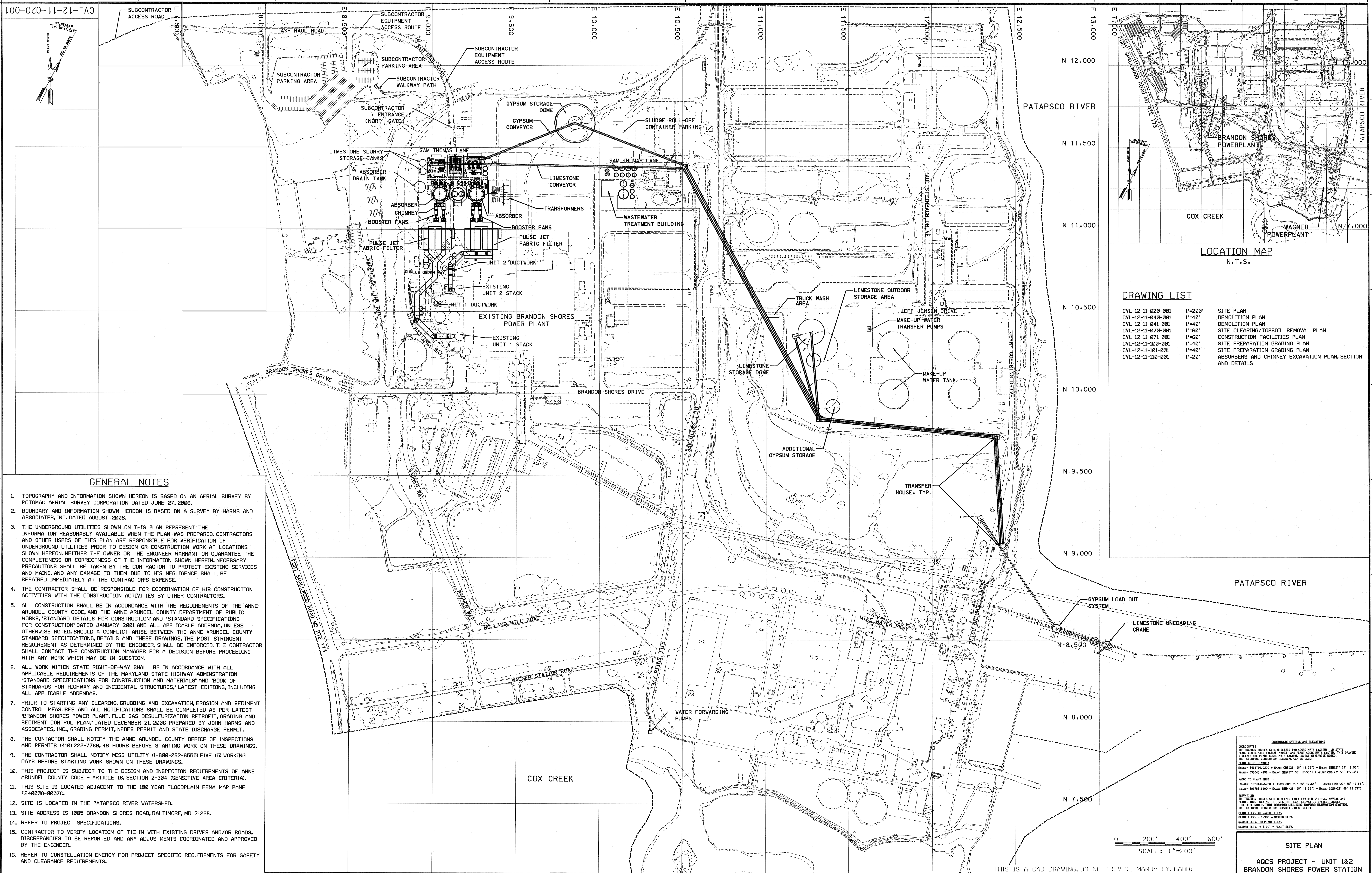


**APPENDIX E. PLOT PLAN**

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## Fort Smallwood Complex Site Plan



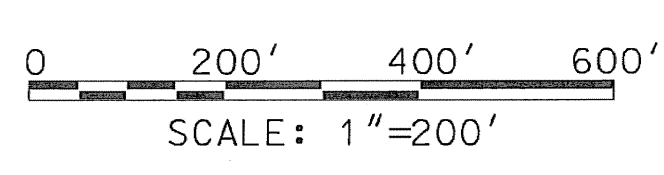


**LOCATION MAP**  
N.T.S.

**DRAWING LIST**

CVL-12-11-020-001	1"=200'	SITE PLAN
CVL-12-11-040-001	1"=40'	DEMOLITION PLAN
CVL-12-11-041-001	1"=40'	DEMOLITION PLAN
CVL-12-11-070-001	1"=60'	SITE CLEARING/TOPSOIL REMOVAL PLAN
CVL-12-11-071-001	1"=60'	CONSTRUCTION FACILITIES PLAN
CVL-12-11-100-001	1"=40'	SITE PREPARATION GRADING PLAN
CVL-12-11-101-001	1"=40'	SITE PREPARATION GRADING PLAN
CVL-12-11-110-001	1"=20'	ABSORBERS AND CHIMNEY EXCAVATION PLAN, SECTION AND DETAILS

- GENERAL NOTES**
- TOPOGRAPHY AND INFORMATION SHOWN HEREON IS BASED ON AN AERIAL SURVEY BY POTOMAC AERIAL SURVEY CORPORATION DATED JUNE 27, 2006.
  - BOUNDARY AND INFORMATION SHOWN HEREON IS BASED ON A SURVEY BY HARMS AND ASSOCIATES, INC. DATED AUGUST 2006.
  - THE UNDERGROUND UTILITIES SHOWN ON THIS PLAN REPRESENT THE INFORMATION REASONABLY AVAILABLE WHEN THE PLAN WAS PREPARED. CONTRACTORS AND OTHER USERS OF THIS PLAN ARE RESPONSIBLE FOR VERIFICATION OF UNDERGROUND UTILITIES PRIOR TO DESIGN OR CONSTRUCTION WORK AT LOCATIONS SHOWN HEREON. NEITHER THE OWNER OR THE ENGINEER WARRANT OR GUARANTEE THE COMPLETENESS OR CORRECTNESS OF THE INFORMATION SHOWN HEREIN. NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MAINS, AND ANY DAMAGE TO THEM DUE TO HIS NEGLIGENCE SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF HIS CONSTRUCTION ACTIVITIES WITH THE CONSTRUCTION ACTIVITIES BY OTHER CONTRACTORS.
  - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE ANNE ARUNDEL COUNTY CODE, AND THE ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS, "STANDARD DETAILS FOR CONSTRUCTION" AND "STANDARD SPECIFICATIONS FOR CONSTRUCTION" DATED JANUARY 2001 AND ALL APPLICABLE ADDENDA, UNLESS OTHERWISE NOTED. SHOULD A CONFLICT ARISE BETWEEN THE ANNE ARUNDEL COUNTY STANDARD SPECIFICATIONS, DETAILS AND THESE DRAWINGS, THE MOST STRINGENT REQUIREMENT AS DETERMINED BY THE ENGINEER, SHALL BE ENFORCED. THE CONTRACTOR SHALL CONTACT THE CONSTRUCTION MANAGER FOR A DECISION BEFORE PROCEEDING WITH ANY WORK WHICH MAY BE IN QUESTION.
  - ALL WORK WITHIN STATE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS OF THE MARYLAND STATE HIGHWAY ADMINISTRATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS" AND "BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES," LATEST EDITIONS, INCLUDING ALL APPLICABLE ADDENDAS.
  - PRIOR TO STARTING ANY CLEARING, GRUBBING AND EXCAVATION, EROSION AND SEDIMENT CONTROL MEASURES AND ALL NOTIFICATIONS SHALL BE COMPLETED AS PER LATEST "BRANDON SHORES POWER PLANT, FLUE GAS DESULFURIZATION RETROFIT, GRADING AND SEDIMENT CONTROL PLAN," DATED DECEMBER 21, 2006 PREPARED BY JOHN HARMS AND ASSOCIATES, INC., GRADING PERMIT, NPDES PERMIT AND STATE DISCHARGE PERMIT.
  - THE CONTRACTOR SHALL NOTIFY THE ANNE ARUNDEL COUNTY OFFICE OF INSPECTIONS AND PERMITS (410) 222-7700, 48 HOURS BEFORE STARTING WORK ON THESE DRAWINGS.
  - THE CONTRACTOR SHALL NOTIFY MISS UTILITY (1-800-282-8555) FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
  - THIS PROJECT IS SUBJECT TO THE DESIGN AND INSPECTION REQUIREMENTS OF ANNE ARUNDEL COUNTY CODE - ARTICLE 16, SECTION 2-304 (SENSITIVE AREA CRITERIA).
  - THIS SITE IS LOCATED ADJACENT TO THE 100-YEAR FLOODPLAIN FEMA MAP PANEL #240000-0007C.
  - SITE IS LOCATED IN THE PATAPSCO RIVER WATERSHED.
  - SITE ADDRESS IS 1005 BRANDON SHORES ROAD, BALTIMORE, MD 21226.
  - REFER TO PROJECT SPECIFICATIONS.
  - CONTRACTOR TO VERIFY LOCATION OF TIE-IN WITH EXISTING DRIVES AND/OR ROADS. DISCREPANCIES TO BE REPORTED AND ANY ADJUSTMENTS COORDINATED AND APPROVED BY THE ENGINEER.
  - REFER TO CONSTELLATION ENERGY FOR PROJECT SPECIFIC REQUIREMENTS FOR SAFETY AND CLEARANCE REQUIREMENTS.



**COORDINATE SYSTEM AND ELEVATIONS**

THE BRANDON SHORES SITE UTILIZES TWO COORDINATE SYSTEMS. NO STATE PLANNED COORDINATE SYSTEM NUMBER AND NAME COORDINATE SYSTEMS. THE FOLLOWING COORDINATE FORMULAS CAN BE USED:

STATE PLANNED COORDINATE SYSTEM (NAD 83) (UTM ZONE 18N)

Formula:  $Easting = 549756.0220 + UTM Easting \times 11.5377 + Northing \times 11.5377$   
 Formula:  $Northing = 53046.4151 + UTM Northing \times 11.5377 + UTM Easting \times 11.5377$

STATE PLANNED COORDINATE SYSTEM (NAD 83) (UTM ZONE 18N)

Formula:  $Easting = 549756.0220 + UTM Easting \times 11.5377 + Northing \times 11.5377$   
 Formula:  $Northing = 53046.4151 + UTM Northing \times 11.5377 + UTM Easting \times 11.5377$

**ELEVATIONS**

THE BRANDON SHORES SITE UTILIZES TWO ELEVATION SYSTEMS. HAWOOD AND PLANT ELEVATIONS ARE BASED ON THE HAWOOD ELEVATION SYSTEM. THE FOLLOWING COORDINATE FORMULAS CAN BE USED:

PLANT ELEV. TO HAWOOD ELEV.  
 Formula:  $Hawood Elev. = 1.50' + Plant Elev.$   
 HAWOOD ELEV. TO PLANT ELEV.  
 Formula:  $Plant Elev. = 1.50' + Hawood Elev.$

CALL BEFORE YOU DIG!  
 MISS UTILITY  
 1-800-282-8555

REVISION APPROVAL RECORD				REVISIONS				DRAWING STATUS				
DISCIPLINE	BY	DATE	RECORD	DISCIPLINE	BY	DATE	APPROVED FOR CONSTRUCTION	ISSUED	REV	DATE	SDE	PEM
ARCH.			MECHANICAL									
CIVIL			NUCLEAR									
ELECTRICAL		5/14/07	PIPING									
ENVIRON.			PROCESS									
GEN. ARRANG.			QA / QC									
HVAC			STRUCTURAL									
I & C												



**SITE PLAN**

**AQCS PROJECT - UNIT 1&2**  
**BRANDON SHORES POWER STATION**

**Washington Group International**  
 310 CANONITE CTR. PRINCETON NJ 08543 (609) 720-0000

WASHINGTON GROUP INTERNATIONAL  
 DRAWING NO. CVL-12-11-020-001

**CONSTELLATION**  
**POWER SOURCE GENERATION**

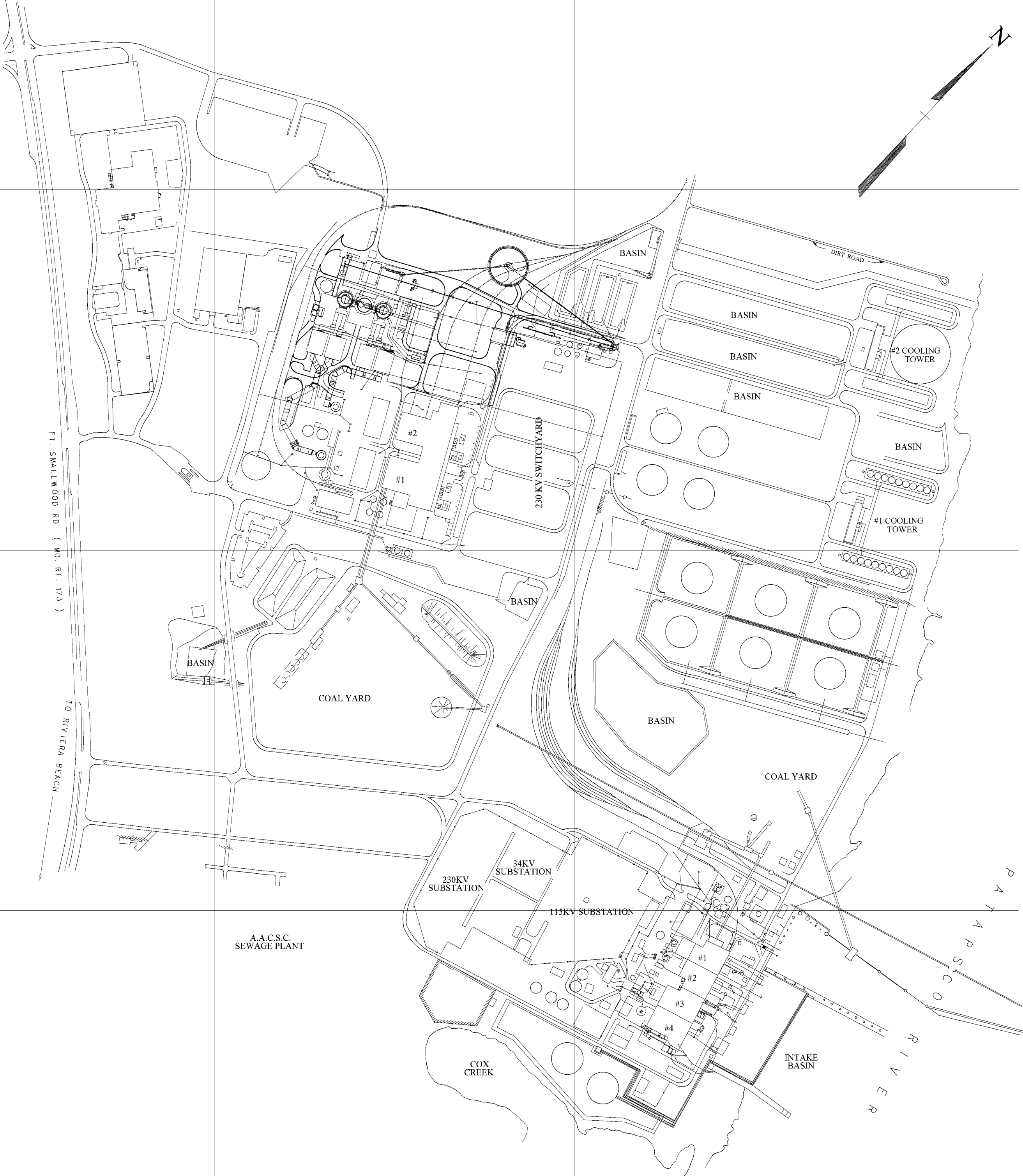
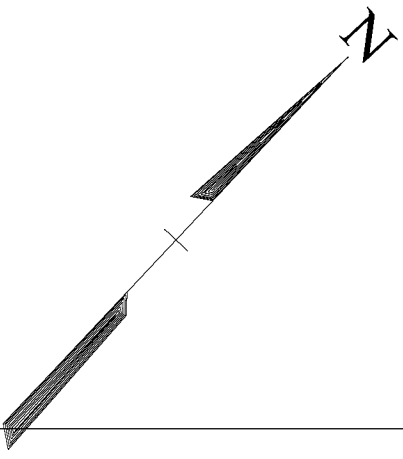
FILE: 11-020-001 SCALE: 1"=200' REV. 0

PROJECT NO.: 29001  
 DRAWN: N. GANDHI DATE: 3/13/07  
 CHECKED: DATE: 05/07/07  
 SCALE: 1"=200'

THIS IS A CAD DRAWING, DO NOT REVISE MANUALLY. CADD



## Brandon Shores Generating Station Site Plan



FT. SMALLWOOD RD ( MD. RT. 173 )

TO RIVIERA BEACH

DIRT ROAD

BASIN

BASIN

BASIN

BASIN

BASIN

#1 COOLING TOWER

#2 COOLING TOWER

230 KV SWITCHYARD

#2

#1

BASIN

BASIN

COAL YARD

BASIN

COAL YARD

230KV SUBSTATION

34KV SUBSTATION

115KV SUBSTATION

A.A.C.S.C. SEWAGE PLANT

COX CREEK

INTAKE BASIN

PATAPSCO RIVER

#1

#2

#3

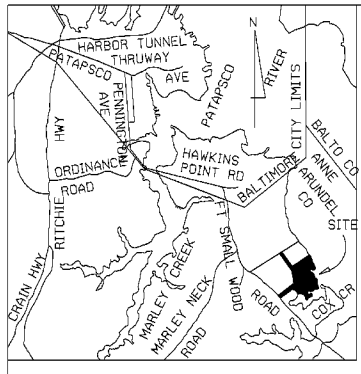
#4

## H.A. Wagner Generating Station Site Plan

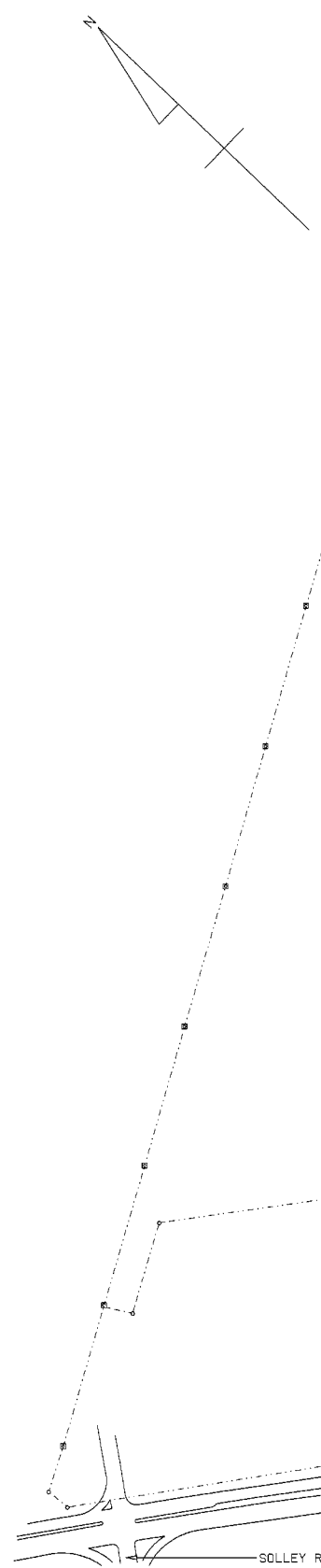


- 1. POWER PLANT BUILDING
- 2. CHLORINATION CONTROL HOUSE NO.1
- 3. CITY WATER PUMP HOUSE NO.1
- 4. TREATMENT BUILDING
- 5. FEED WATER PUMP BLDG #3 SUBFP
- 6. MAKE UP DEMINERALIZATION BLDG. FOR UNITS 2&3
- 7.
- 8. CONSTRUCTION WAREHOUSE NO.4
- 9. TUG BOAT EQUIP STORAGE BUILDING
- 10. LUBE OIL STORAGE BLDG.
- 11. CONTROL HOUSE FOR COAL CONVEYING EQUIP, COAL CREW QUARTERS & OIL STORAGE
- 12. HYDROGEN STORAGE BUILDING
- 13.
- 14. POWER PLANT GATE HOUSE
- 15. CONTROL HOUSE
- 16. SCREEN WELL PUMP HOUSE NO.1
- 17.
- 18.
- 19.
- 20. SCREEN WELL PUMP HOUSE NO.3
- 21. FIRE SCHOOL/LECTURE BLDG./3.4 CONTROL RM/SIMULATOR ROOM
- 22. STOREHOUSE FOR MOBILE COAL HANDLING EQUIPMENT
- 23.
- 24.
- 25.
- 26.
- 27.
- 28.
- 29.
- 30. SWITCHGEAR/CDNTRL HOUSE
- 31.
- 32.
- 33. STOREROOM NO.2
- 34. RELAY HOUSE
- 35.
- 36. PUMP HOUSE
- 37. TRAVELING SCREEN REPAIR BUILDING
- 38. FUEL OIL PUMP HOUSE NO.2
- 39. SCREEN WELL PUMP HOUSE NO.4
- 40. CHLORINATION CONTROL HOUSE NO.2
- 41. FUEL OIL UNLOADING HOUSE
- 42. CONTROL HOUSE FOR OIL TANK FARM EQUIPMENT
- 43. CONTROL HOUSE FOR OIL PLANT EQUIPMENT
- 44. ENCLOSURE FOR FUEL OIL PUMPS & EQUIPMENT
- 45.
- 46. PUMP SKID BUILDING
- 47. PRECIPITATOR CONTROL ROOM/SWITCHGEAR BUILDING
- 48. VACCUM PUMP BLDG. UNIT 2&3

- BOILER HOUSE
- TURBINE ROOM
- EAST SERVICE BLDG
- NORTH SERVICE BLDG
- RECTIFIER ROOM
- AIR COMPRESSOR ROOM
- MICROWAVE BLDG
- DUST COLLECTOR AREA & FLY ASH SILO
- LUBRICATING & TURBINE OIL STORAGE ROOM



VICINITY PLAN  
SCALE: 1"=1.4 MILES



BRANDON SHORES  
GENERATING PLANT  
SITE

SEE LOCATION OF BUILDINGS PROPERTY PLAT  
DWG 138-721-E

BRANDON SHORES  
GENERATING PLANT  
SITE

SEE LOCATION OF BUILDINGS PROPERTY PLAT  
DWG 138-721-E

FORT SMALLWOOD  
COMPLEX SITE  
SEE LOCATION OF BUILDINGS &  
DEED DATA  
PROPERTY PLAT  
DWG 141-221-E

- A. ASH PITS/SEEDLING TANKS/DE-WATER BIN
- B. UNIT TRANSFORMERS
- C. DISCHARGE CANALS
- D. FUEL OIL TANK & TWO LUBE OIL TANKS
- E. CITY WATER TANKS
- F. CAR DUMPER STRUCTURE (NOT USED)
- G. SCREEN WELLS
- H. BREAKER HOUSE
- J. GAS TURBINE GENERATOR
- K. OIL PUMPS
- L. SEAL PIT
- M. STACKS
- N. DUST COLLECTOR
- O. 7,500,000 GALLONS FUEL OIL TANK 1A
- P. 7,500,000 GALLONS FUEL OIL TANK 1B
- Q. 7,500,000 GALLONS FUEL OIL TANK 2A
- R. 7,500,000 GALLONS FUEL OIL TANK 2B
- S. 7,500,000 GALLONS FUEL OIL TANK 3A
- T. 7,500,000 GALLONS FUEL OIL TANK 3B
- U. JUNCTION HOUSE FOR CONVEYORS A,B & C
- V. 10,000 GALLON FUEL OIL ADDITIVE TANK
- W. 10,000 GALLON FUEL OIL ADDITIVE TANK
- X. AMONIA TANK
- Y. SO<sub>2</sub> TANK
- Z. NEUTRALIZING TANK, 3
- AA. BULK H<sub>2</sub> STORAGE TANK
- BB. SCREEN WELL PUMP HOUSE #2
- CC. ACID TANK
- DD. OIL/WATER SEPARATOR
- EE. COAL HANDLERS' BUILDING
- FF. UNIT 2 & 3 FLY ASH SILOS
- GG. GUARD BOOTH
- HH. FUEL OIL PUMP ENCLOSURE FOR GAS TURBINE GENERATOR

- NOTES:
- FOR BEARINGS, DISTANCES, DEED DATA & ANY OTHER INFORMATION REQUIRED, SEE DEED DATA PROPERTY PLAT DWG 116-402-E.
  - THIS PROPERTY IS LOCATED IN THE 3RD DISTRICT, ANNE ARUNDEL COUNTY, MARYLAND.

THIS DRAWING SUPERSEDES  
DWG 116-405-E, DATED 12-31-57.

DESIGN	ENGINEERING
Proj. No. _____	Civil _____
Designed _____	Elect. _____
Drawn _____	Mech. _____
Checked _____	
Appd. _____	
Date Appd. _____	
APPROVALS	
Rev. _____	Date _____
REVISIONS	

	ELECTRIC DIVISION PROPERTY PLAT LOCATION OF BUILDINGS
	SW SIDE PATAPSCO RIVER APPROX 1/2 MILE EAST OF FT. SMALLWOOD RD (MD. RT. 173)
	HERBERT A. WAGNER

## **APPENDIX F. MDE APPLICATION COMPLETENESS CHECKLIST**

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## VI. Application Completeness Checklist

The purpose of this part is to list the information required to achieve a Part 70 application shield.

### **Cover Page**

- ( x ) Name and address of owner or operator, including telephone number.
- ( x ) Name and address of facility, including the plant manager's name and telephone number.
- ( x ) A 24-hour emergency telephone number for air pollution matters.

### **Section 1 CERTIFICATION STATEMENTS**

- ( x ) The certification statement completed and signed by a responsible official.

### **Section 2 FACILITY DESCRIPTION SUMMARY**

- ( x ) A brief description of each of the source's process(es), including all applicable SIC codes and end products.
- ( x ) Flow diagrams indicating all emissions units, emission points, and control devices.
- ( x ) A plot plan of the entire facility.
- ( x ) Emission Certification Report.
- ( x ) General Emissions Information.

### **Section 3 EMISSIONS UNIT DESCRIPTIONS**

This section must be completed for each emissions unit.

#### **Part A**

- ( x ) Emissions unit number.
- ( x ) Detailed description of unit, including all emission points.
- ( x ) Federally enforceable limit(s) on the operating schedule.
- ( x ) Fuel consumption information for any emissions unit that consumes fuel including the type of fuel, percent sulfur, and annual usage of fuel.

## **Part B**

- ( x ) A citation and description of each federally enforceable requirement, including all emission standards, for each emissions unit.
- ( x ) A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.
- ( x ) The frequency of submittal of the compliance demonstration during the permit term.

## **Part C**

- ( x ) Emissions unit number.
- ( x ) Permit to construct number.
- ( x ) Emissions point number(s).
- ( x ) Date(s) the permit to construct was issued.
- ( x ) Condition number(s) as indicated on the permit to construct.
- ( x ) Description of the permit condition(s) and the reason(s) why they are believed to be obsolete, extraneous, or insignificant.

## **Part D**

- (N/A) Description of all alternate operating scenarios that apply to an emissions unit.
- (N/A) Number assigned to each scenario.
- (N/A) Emissions unit number.
- (N/A) Description of the operating parameters for the emissions unit and other information which describes the how the operation of the unit will change under the different scenario.

## **Part E**

- (N/A) A citation and description of each federally enforceable requirement triggered by an operating scenario, including all emission standards, for each emissions unit.

(N/A) As an attachment, the date and results of the most recent compliance demonstration for each emission standard and/or emissions certification report with relevant supporting documentation.

(N/A) A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.

(N/A) The frequency of submittal of the compliance demonstration during the permit term.

**Section 4 CONTROL EQUIPMENT**

( x ) The type of each piece of air pollution control equipment

( x ) The capture and control efficiencies of the control equipment.

**Section 5 SUMMARY SHEET OF POTENTIAL EMISSIONS**

( N/A ) Quantity of potential emissions for criteria pollutants and HAPs emitted in tons per year for each emissions unit.

( N/A ) Fugitive emission estimations for the entire facility for criteria pollutants and HAPs emitted in tons per year.

( N/A ) Basis for all emission calculations.

**Section 6 AN EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS**

(N/A) An explanation of the proposed exemption.

**Section 7 COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS UNITS**

(N/A) Identification of emissions unit(s) not in compliance, including the requirement being violated and the effective compliance date.

(N/A) Detailed description of methods to be used to achieve compliance.

(N/A) A schedule of remedial measures, including an enforceable sequence of actions with milestones.

## **Attachment**

- ( x ) Checklist of Insignificant Activities
- ( x ) CAM Plan (If Applicable)

**APPENDIX G. TAX FORM**

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**MARYLAND DEPARTMENT OF THE ENVIRONMENT**  
1800 Washington Boulevard • Suite 720 • Baltimore, Maryland 21230-1720  
410-537-3000 • 800-633-6101 • <http://www.mde.maryland.gov>

Air and Radiation Administration • Air Quality Permits Program

**Budget Reconciliation and Financing Act of 2003**  
**(Commonly referred as Maryland House Bill 935)**

On July 1, 2003, House Bill 935, Chapter 203 amended § 1-203 of the Environment Article, Annotated Code of Maryland, as follows:

Section 1-203(b).

(1) A license or permit is considered renewed for purposes of this subsection if the license or permit is issued by a unit of State government to a person for the period immediately following a period for which the person previously possessed the same or a substantially similar license.

(2) Before any license or permit may be renewed under this article, **the issuing authority shall verify through the office of the Comptroller (emphasis added)** that the applicant has paid all undisputed taxes and the unemployment insurance contributions payable to the Comptroller or the Secretary of Labor, Licensing, and Regulation or that the applicant has provided for payment in a manner satisfactory to the unit responsible for collection.

In order for the Maryland Department of the Environment (MDE) to verify this compliance, we would need you to provide the following information before we can process or issue your renewal license, permit, or certification:

**Current MDE License/Permit No.:** 24-003-0468

**Name of Licensee or Permit Holder:** Raven Power Fort Smallwood LLC

**Address:** 1005 Brandon Shores Rd., Suite 100, Baltimore, MD 21226

**Contact Name:** Edwin Much **Title:** Regional Environmental Director

**Contact Telephone Number:** (410) 787-5423

**Privacy Act Notice:** This Notice is provided pursuant to the Federal Privacy Act of 1974, 5 U.S.C. § 552a. Disclosure of your Social Security or Federal Tax Identification on this form is mandatory pursuant to the provisions of § 1-203 (2003) of Environment Article, Annotated Code of Maryland, which requires MDE to verify that an applicant for a permit or license has paid all undisputed taxes and unemployment insurance. Social Security and Federal Tax Identification Nos. will not be used for any purposes other than those described in this Notice.

**Federal Employer Identification Number (FEIN):** 90-0885103

*Certification: I certify that the above information is true and correct to the best of my knowledge.*

Scott M. Blum

Signature

9/30/2020

Date

**Complete and return this form to Sena Harlley at the above address. If you have any questions, please contact Ms. Harlley at (410) 537-3251.**



## **APPENDIX H. ANNUAL EMISSIONS REPORT (2019)**

---



March 27, 2020

Maryland Department of the Environment  
Air and Radiation Management Administration  
1800 Washington Boulevard, Suite 715  
Baltimore, Maryland 21230-1720  
Attn: Daniel Davis, Compliance Program

Re: Raven Power Fort Smallwood LLC, Brandon Shores and H. A. Wagner  
Generating Stations Calendar Year 2019 Emissions Inventory

Dear Mr. Davis:

Enclosed please find the 2019 Emissions Inventory for the Brandon Shores and H. A. Wagner generating facilities operated by Raven Power Fort Smallwood LLC.

Per the CO2 Budget Trading Permit, included with this report are summary tables of generation for compliance with the Regional Greenhouse Gas Initiative. We are submitting this data with the annual emissions inventory at the request of Mr. Duane King of MDE-ARMA.

The most recently submitted demonstration of compliance for Toxic Air Pollutants (TAPs) remains unchanged and still applies to both Brandon Shores and H.A. Wagner.

Please direct any questions regarding this report to me at 1005 Brandon Shores Road, Suite 100, Baltimore, MD 21226, by phone at 410-787-5423, or by email at [Edwin.much@talenergy.com](mailto:Edwin.much@talenergy.com). You may also contact Melissa Sampson, Environmental Manager, at 410-787-5166, or by email at [Melissa.sampson@talenergy.com](mailto:Melissa.sampson@talenergy.com)

Regards,

Edwin Much  
Regional Environmental Director

Enclosure



March 27, 2020

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

Re: Raven Power Fort Smallwood LLC, Brandon Shores and H. A. Wagner  
Generating Stations Calendar Year 2019 Emissions Inventory

Dear Compliance Officer:

Enclosed please find the 2019 Emissions Inventory for the Brandon Shores and H. A. Wagner generating facilities operated by Raven Power Fort Smallwood LLC.

Per the CO2 Budget Trading Permit, included in this report are summary tables of generation for compliance with the Regional Greenhouse Gas Initiative. We are submitting this data with the annual emissions inventory at the request of Mr. Duane King of MDE-ARMA.

The most recently submitted demonstration of compliance for Toxic Air Pollutants (TAPs) remains unchanged and still applies to both Brandon Shores and H.A. Wagner.

Please direct any questions regarding this report to me at 1005 Brandon Shores Road, Suite 100, Baltimore, MD 21226, by phone at 410-787-5423, or by email at [Edwin.much@talenergy.com](mailto:Edwin.much@talenergy.com). You may also contact Melissa Sampson, Environmental Manager, at 410-787-5166, or by email at [Melissa.sampson@talenergy.com](mailto:Melissa.sampson@talenergy.com)

Regards,

Edwin Much  
Regional Environmental Director

Enclosure

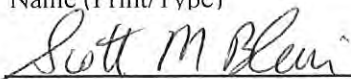
**FORM 1:**

**GENERAL FACILITY INFORMATION**  
**EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2019

A. FACILITY IDENTIFICATION				<b>Do Not Write in This Space</b>	
Facility Name Brandon Shores and H. A. Wagner Generating Stations				Date Received Regional	
Address 1005 Brandon Shores Road, Suite 100				Date Received State	
City Baltimore		County Anne Arundel		AIRS Code	
Zip Code 21226				FINDS Code	
B. Briefly describe the major function of the facility				SIC Code	
Fossil Fuel Electric Generating Facilities				Facility Number	
C. SEASONAL PRODUCTION (% if applicable) Not applicable				TEMPO ID:	
Winter (Dec.-Feb.)	Spring (Mar.-May)	Summer (Jun.-Aug.)	Fall (Sept.-Nov.)	Reviewed By:	
				Name	Date
D. Explain any increases or decreases in emissions from the previous calendar year for each registration at this facility.					
E. CONTROL DEVICE INFORMATION (for NOx and VOC sources only)					
Control Device		Capture Efficiency		Removal Efficiency	
3-0015 Low NOx Burners / Over-fire Air		NA		Approx. 40%	
3-0016 Low NOx Burners / BOOS		NA		Approx. 40%	
3-0015 & 3-0016 SCR		NA		Approx. 90%	
3-0015 & 3-0016 Flue Gas Desulfurization		99%		95%	
3-0017 Low NOx Burners / SNCR		NA		Approx. 35%	
3-0003 Low NOx Burners / Over-fire Air / SCR		NA		Approx. 90%	

I am familiar with the premises and the installations and sources for which this report is submitted. I have personally examined the information in this report, which consists of 71 pages (including attachments), and certify that the information is correct to the best of my knowledge.

Scott Blair	Authorized Representative	3/24/2020
_____ Name (Print/Type)	_____ Title	_____ Date
		410-707-5017
_____ Signature		_____ Telephone

Raven Power Fort Smallwood LLC  
2019 Equipment Operational Statistics

Raven Power Fort Smallwood LLC 2019 Annual Generation for RGGI Sources			
Facility / Unit / Emissions Unit No.	MDE Registration Number	Gross Generation (MWHrs)	Net Generation (MWHrs)
Brandon Shores Unit 1 (FSC-BS-Unit 1)	3-0015	919,709	798,773
Brandon Shores Unit 2 (FSC-BS-Unit 2)	3-0016	1,749,130	1,546,573
H.A. Wagner Unit 1 (FSC-HAW-Unit 1)	5-0489	12,685	12,389
H.A. Wagner Unit 2 (FSC-HAW-Unit 2)	3-0017	17,925	17,202
H.A. Wagner Unit 3 (FSC-HAW-Unit 3)	3-0003	174,995	161,801
H.A. Wagner Unit 4 (FSC-HAW-Unit 4)	4-0017	8,893	8,341
Total		2,883,337	2,545,079

Raven Power Fort Smallwood LLC 2019 Auxiliary Equipment Operating Hours and Capacity Factors			
Facility / Unit / Emissions Unit No.	MDE Registration Number	Operating Hours (Annual)	Capacity Factor (%)
Brandon Shores Auxiliary Boiler No. 1 (FSC-BS-AuxBlr 1)	4-0507	102.2	0.00
Brandon Shores Auxiliary Boiler No. 2 (FSC-BS-AuxBlr 2)	4-0508	0	0.00
Brandon Shores Quench Pump No. 1 (FSC-BS-QP)	9-0988	30.5	0.35
Brandon Shores Quench Pump No. 2 (FSC-BS-QP)	9-0988	30.6	0.35
Brandon Shores Emergency Generator (FSC-BS-EG)	N/A	12.4	0.06
H.A. Wagner Combustion Turbine (FSC-HAW-CT)	4-0007	13.3	0.11

Capacity Factors for Auxiliary Boilers are calculated based on heat input per COMAR 26.11.09.01(1-2) (a)  
 Capacity Factors for the Quench Pumps are calculated based on operating hours (Op Hours / 8760)  
 Combustion Turbine Capacity Factor is calculated based on generation per COMAR 26.11.09.01 B(1-2) (b)  
 Brandon Shores' Emergency Generator and Quench Pumps were operated for maintenance and testing purposes only



**FORM 2:**

**CRITERIA AIR POLLUTANTS  
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2019

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: NO<sub>x</sub>

Equipment Description/ Registration No.	SCC Number	Fuel	Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions Methods
			Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	
Brandon Shores Aux. Blr. No. 1 4-0507		No. 2 Oil	S 0.141	F 15.7				18	0.00	5.7		C3
Brandon Shores Aux. Blr. No. 2 4-0508		No. 2 Oil	S 0.00	F 0.00			0.0	0	0.00	0.0		-
Brandon Shores Unit 1 3-0015		No. 2 Oil / Coal	S 341	F 5456			21.4	125	4941	21.4		C1
Brandon Shores Unit 2 3-0016		No. 2 Oil / Coal	S 658	F 6121			22.4	215	5380	22.4		C1
Brandon Shores Quench Pumps 9-0988		ULS Diesel	S 0.148	F 6.17			1.2	48	6.15	1.2		C4
			S									
			F									
			S									
			F									
			S									
			F									
			S									
			F									
			S									
			F									
<b>Total</b>			See next sheet for facility total emissions.									

S - Stack Emissions                      F - Fugitive Emissions                      Daily emissions (lbs/day) are lbs/operating day of the source

**TOSD:** Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

**Fuel:** Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel (see attached calculations for separate fuel emissions).

- |                                     |   |   |
|-------------------------------------|---|---|
| <u>Emission Estimation Method</u>   |   |   |
| A1-U.S. EPA Reference Method        | C1-User calculated based on source test or other measurement                            | C5-User calculated based on a State or local agency emission factor |
| A2-Other Particulate Sampling Train | C2-User calculated based on material balance using engineering knowledge of the process | C6-New construction, not operational                                |
| A3-Liquid Absorption Technique      | C3-User calculated based on AP-42   | C7-Source closed, operation ceased                                  |
| A4-Solid Absorption Technique       | C4-User calculated by best guess/engineering Judgement                                  | C8-Computer calculated based on standard                            |
| A5-Freezing Out Technique           |   |   |
| A9-Other, Specify                   |   |   |

**FORM 2:**

**CRITERIA AIR POLLUTANTS  
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2019

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: NO<sub>x</sub>

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions Methods	
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start		End
H. A. Wagner Unit 1 5-0489		Nat. Gas / No. 6 Oil	S F	17	337				101	511	17.7			C1
H. A. Wagner Unit 2 3-0017		Nat. Gas / Coal	S F	31	1442				43	1043	17.5			C1
H. A. Wagner Unit 3 3-0003		Nat. Gas / Coal	S F	64	2246				57	1710	17.5			C1
H. A. Wagner Unit 4 4-0017		Nat. Gas / No. 6 Oil	S F	18	3000				12	2533	13.5			C1
H. A. Wagner CT 4-0007		No. 2 Oil	S F	1.0	400				5	300	1.8			C3
			S											
			F											
			S											
			F											
			S											
			F											
			S											
			F											
			S											
			F											
<b>Total</b>				1130	19024					16424				

Totals above include emissions from previous page.

S - Stack Emissions                      F - Fugitive Emissions                      Daily emissions (lbs/day) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel (see attached calculations for separate fuel emissions).

Emission Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3-User calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operation ceased
- C8-Computer calculated based on standard

**FORM 2:**

**CRITERIA AIR POLLUTANTS  
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2019

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: SO<sub>2</sub>

Equipment Description/ Registration No.	SCC Number	Fuel	Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Emissions Methods
			Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	
Brandon Shores Aux. Blr. No. 1 4-0507		No. 2 Oil	S 0.022	F 2.44	5.7			18	N/A	N/A	N/A	N/A	C3
Brandon Shores Aux. Blr. No. 2 4-0508		No. 2 Oil	S 0.00	F 0.00	0.0			0	N/A	N/A	N/A	N/A	-
Brandon Shores Unit 1 3-0015		No. 2 Oil / Coal	S 546	F 8736	21.4			125	N/A	N/A	N/A	N/A	C1
Brandon Shores Unit 2 3-0016		No. 2 Oil / Coal	S 953	F 8865	22.4			215	N/A	N/A	N/A	N/A	C1
Brandon Shores Quench Pumps 9-0988		ULS Diesel	S 0.001	F 0.04	1.2			48	N/A	N/A	N/A	N/A	C4
			S										
			F										
			S										
			F										
			S										
			F										
			S										
			F										
			S										
			F										
<b>Total</b>			See next sheet for facility total emissions.										

S - Stack Emissions                      F - Fugitive Emissions                      Daily emissions (lbs/day) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel (see attached calculations for separate fuel emissions).

Emission Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3-User calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operation ceased
- C8-Computer calculated based on standard



**FORM 2:**

**CRITERIA AIR POLLUTANTS  
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2019

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: SO<sub>2</sub>

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Emissions Methods	
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End		
H. A. Wagner Unit 1 5-0489		Nat. Gas / No. 6 Oil	S F	15.3	303					N/A					C1
H. A. Wagner Unit 2 3-0017		Nat. Gas / Coal	S F	89	4140	17.7			101	N/A	N/A	N/A	N/A		C1
H. A. Wagner Unit 3 3-0003		Nat. Gas / Coal	S F	1122	39368	17.5			43	N/A	N/A	N/A	N/A		C1
H. A. Wagner Unit 4 4-0017		Nat. Gas / No. 6 Oil	S F	40	6667	17.5			57	N/A	N/A	N/A	N/A		C1
H. A. Wagner CT 4-0007		No. 2 Oil	S F	0.040	16	13.5			12	N/A	N/A	N/A	N/A		C3
			S			1.8			5	N/A	N/A	N/A	N/A		
			F												
			S												
			F												
			S												
			F												
			S												
			F												
			S												
			F												
<b>Total</b>				2765	68097					N/A					

Totals above include emissions from previous page.

S - Stack Emissions                      F - Fugitive Emissions                      Daily emissions (lbs/day) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel (see attached calculations for separate fuel emissions).

Emission Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3-User calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operation ceased
- C8-Computer calculated based on standard

1/09/08

**FORM 2:**

**CRITERIA AIR POLLUTANTS  
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2019

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: CO

Equipment Description/ Registration No.	SCC Number	Fuel	Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Emissions Methods	
			Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End		
Brandon Shores Aux. Blr. No. 1 4-0507		No. 2 Oil	S 0.035	F 3.89						N/A	N/A	N/A	N/A	C3
Brandon Shores Aux. Blr. No. 2 4-0508		No. 2 Oil	S 0.00	F 0.00						N/A	N/A	N/A	N/A	-
Brandon Shores Unit 1 3-0015		No. 2 Oil / Coal	S 94	F 1504						N/A	N/A	N/A	N/A	C1
Brandon Shores Unit 2 3-0016		No. 2 Oil / Coal	S 176	F 1637						N/A	N/A	N/A	N/A	C1
Brandon Shores Quench Pumps 9-0988		ULS Diesel	S 0.011	F 0.46						N/A	N/A	N/A	N/A	C4
			S	F										
			S	F										
			S	F										
			S	F										
			S	F										
			S	F										
			S	F										
			S	F										
<b>Total</b>			See next sheet for facility total emissions.											

S - Stack Emissions                      F - Fugitive Emissions                      Daily emissions (lbs/day) are lbs/operating day of the source

**TOSD:** Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

**Fuel:** Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel (see attached calculations for separate fuel emissions).

Emission Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3-User calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operation ceased
- C8-Computer calculated based on standard

**FORM 2:**

**CRITERIA AIR POLLUTANTS  
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2019

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: CO

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Emissions Methods
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	
H. A. Wagner Unit 1 5-0489		Nat. Gas / No. 6 Oil	S F	12	238				101	N/A	N/A	N/A	N/A	C1
H. A. Wagner Unit 2 3-0017		Nat. Gas / Coal	S F	4	186				43	N/A	N/A	N/A	N/A	C1
H. A. Wagner Unit 3 3-0003		Nat. Gas / Coal	S F	19	667				57	N/A	N/A	N/A	N/A	C1
H. A. Wagner Unit 4 4-0017		Nat. Gas / No. 6 Oil	S F	3	500				12	N/A	N/A	N/A	N/A	C1
H. A. Wagner CT 4-0007		No. 2 Oil	S F	0.004	1.600				5	N/A	N/A	N/A	N/A	C3
			S											
			F											
			S											
			F											
			S											
			F											
			S											
			F											
			S											
			F											
<b>Total</b>				308	4738					N/A				

Totals above include emissions from previous page.

S - Stack Emissions                      F - Fugitive Emissions                      Daily emissions (lbs/day) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel (see attached calculations for separate fuel emissions).

Emission Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3-User calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operation ceased
- C8-Computer calculated based on standard

1/09/08

**FORM 2:**

**CRITERIA AIR POLLUTANTS  
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2019

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: VOC

Equipment Description/ Registration No.	SCC Number	Fuel	Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions Methods	
			Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start		End
Brandon Shores Aux. Blr. No. 1 4-0507		No. 2 Oil	S 0.001	F 0.111					18	0.000	5.7		C3
Brandon Shores Aux. Blr. No. 2 4-0508		No. 2 Oil	S 0.000	F 0.000					0	0.000	0.0		-
Brandon Shores Unit 1 3-0015		No. 2 Oil / Coal	S 11	F 176					125	172	21.4		C3
Brandon Shores Unit 2 3-0016		No. 2 Oil / Coal	S 21	F 195					215	192	22.4		C3
Brandon Shores Quench Pumps 9-0988		ULS Diesel	S 0.037	F 1.54					48	1.55	1.2		C3
			S										
			F										
			S										
			F										
			S										
			F										
			S										
			F										
			S										
			F										
<b>Total</b>			See next sheet for facility total emissions.										

S - Stack Emissions                      F - Fugitive Emissions                      Daily emissions (lbs/day) are lbs/operating day of the source

**TOSD:** Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

**Fuel:** Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel (see attached calculations for separate fuel emissions).

Emission Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3-User calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operation ceased
- C8-Computer calculated based on standard

**FORM 2:**

**CRITERIA AIR POLLUTANTS  
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2019

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: VOC

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions Methods	
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start		End
H. A. Wagner Unit 1 5-0489		Nat. Gas / No. 6 Oil	S F	0.880	17.4	17.7			101	10	17.7			C1
H. A. Wagner Unit 2 3-0017		Nat. Gas / Coal	S F	0.410	19	17.5			43	14	17.5			C1
H. A. Wagner Unit 3 3-0003		Nat. Gas / Coal	S F	2.22	78	17.5			57	65	17.5			C1
H. A. Wagner Unit 4 4-0017		Nat. Gas / No. 6 Oil	S F	0.375	63	13.5			12	63	13.5			C1
H. A. Wagner CT 4-0007		No. 2 Oil	S F	4.56E-04	0.182	1.8			5	0.120	1.8			C3
			S											
			F											
			S											
			F											
			S											
			F											
			S											
			F											
			S											
			F											
<b>Total</b>				36	550					518				

Totals above include emissions from previous page.

S - Stack Emissions                      F - Fugitive Emissions                      Daily emissions (lbs/day) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel (see attached calculations for separate fuel emissions).

Emission Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3-User calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operation ceased
- C8-Computer calculated based on standard



**FORM 2:**

**CRITERIA AIR POLLUTANTS  
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2019

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: Lead (Pb)

Equipment Description/ Registration No.	SCC Number	Fuel	Actual Emissions		Operating Schedule (Actual)				TOSD Lbs/dy	Operating Schedule		Emissions Methods
			Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr		Hrs/dy	Start	
Brandon Shores Aux. Blr. No. 1 4-0507		No. 2 Oil	S 8.70E-06	F 9.67E-04				18	N/A			C3
Brandon Shores Aux. Blr. No. 2 4-0508		No. 2 Oil	S 0.000	F 0.000			0.0	0	N/A			C3
Brandon Shores Unit 1 3-0015		No. 2 Oil / Coal	S 3.73E-03	F 5.97E-02			21.4	125	N/A			C1
Brandon Shores Unit 2 3-0016		No. 2 Oil / Coal	S 3.74E-03	F 3.48E-02			22.4	215	N/A			C1
Brandon Shores Quench Pumps 9-0988		ULS Diesel	S N/A	F			N/A	N/A	N/A			
			S									
			F									
			S									
			F									
			S									
			F									
			S									
			F									
			S									
			F									
<b>Total</b>			See next sheet for facility total emissions.									

S - Stack Emissions

F - Fugitive Emissions

Daily emissions (lbs/day) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel (see attached calculations for separate fuel emissions).

Emission Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3-User calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operation ceased
- C8-Computer calculated based on standard

1/09/08

**FORM 2:**

**CRITERIA AIR POLLUTANTS  
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2019

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: Lead (Pb)

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions Methods	
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start		End
H. A. Wagner Unit 1 5-0489		Nat. Gas / No. 6 Oil	S	3.11E-04	6.16E-03					N/A				C3
H. A. Wagner Unit 2 3-0017		Nat. Gas / Coal	S	1.17E-05	5.44E-04	17.7			101	N/A	N/A			C1
H. A. Wagner Unit 2 3-0017		Nat. Gas / Coal	F			17.5			43	N/A	N/A			
H. A. Wagner Unit 3 3-0003		Nat. Gas / Coal	S	1.01E-03	3.54E-02					N/A				C1
H. A. Wagner Unit 3 3-0003		Nat. Gas / Coal	F			17.5			57	N/A	N/A			
H. A. Wagner Unit 4 4-0017		Nat. Gas / No. 6 Oil	S	6.40E-04	0.107					N/A				C3
H. A. Wagner Unit 4 4-0017		Nat. Gas / No. 6 Oil	F			13.5			12	N/A	N/A			
H. A. Wagner CT 4-0007		No. 2 Oil	S	1.56E-05	6.24E-03					N/A				C3
H. A. Wagner CT 4-0007		No. 2 Oil	F			1.8			5	N/A	N/A			
			S											
			F											
			S											
			F											
			S											
			F											
			S											
			F											
			S											
			F											
<b>Total</b>				0.01	0.25					N/A				

Totals above include emissions from previous page.

S - Stack Emissions                      F - Fugitive Emissions                      Daily emissions (lbs/day) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel (see attached calculations for separate fuel emissions).

Emission Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3-User calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operation ceased
- C8-Computer calculated based on standard

**FORM 3: PM**

**EMISSIONS CERTIFICATION REPORT**

**Particulate Matter**

Calendar Year: 2019

Facility Name: Fort Smallwood Complex

Facility ID: 24-003-00468

Pollutant: PM

Equipment Description/ Registration No.	SCC Number	Fuel		PM - Filterable		PM 10 - Filterable		PM 2.5 - Filterable		PM Condensable		Operation Days/yr	Emissions Methods
				Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day		
Brandon Shores Aux. Blr. No. 1 4-0507		No. 2 Oil	S	1.41E-02	1.57E+00	7.06E-03	7.84E-01	1.76E-03	1.96E-01	9.17E-03	1.02E+00	18	C3
			F										
Brandon Shores Aux. Blr. No. 2 4-0508		No. 2 Oil	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	
			F										
Brandon Shores Unit 1 3-0015		No. 2 Oil / Bit. Coal	S	7.12	113.9	6.60	105.6	3.77	60.3	10.3	165	125	C1, C3
			F										
Brandon Shores Unit 2 3-0016		No. 2 Oil / Bit. Coal	S	0.100	0.930	0.092	0.856	0.053	0.493	36.8	342	215	C1, C3
			F										
BS Quench Pumps 9-0988		ULS Diesel	S	2.67E-03	0.111	2.67E-03	0.111	2.67E-03	0.111	N/A	N/A	48	C2
			F										
BS Material Handling 6-1143		N/A	S	Source PM from Brandon Shores MH Calculation sheet are included in Fugitive values for entry into Tempo								242	C2, C3, C4
			F	10.4	86.0	5.42	44.8	0.798	6.60	N/A	N/A		
BS Limestone Handling 6-1149		N/A	S									296	C2, C3, C4
			F	0.650	4.39	0.282	1.91	0.042	0.284	N/A	N/A		
BS Gypsum Handling 6-1150		N/A	S									161	C2, C3, C4
			F	0.363	4.51	0.123	1.53	0.123	1.53	N/A	N/A		
			S										
			F										
			S										
			F										
<b>Total</b>				See next sheet for facility total PM emissions.									

S - Stack Emissions

F - Fugitive Emissions

Daily emissions (lbs/day) are lbs/operating day of the source

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel (see attached calculations for separate fuel emissions).

Emission Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3-User calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operation ceased
- C8-Computer calculated based on standard



**FORM 3: PM**

**EMISSIONS CERTIFICATION REPORT**

**Particulate Matter**

Calendar Year: 2019

Facility Name: Fort Smallwood Complex

Facility ID: 24-003-00468

Pollutant: PM

Equipment Description/ Registration No.	SCC Number	Fuel		PM - Filterable		PM 10 - Filterable		PM 2.5 - Filterable		PM Condensable		Operation Days/yr	Emissions Methods
				Tons/yr	Lbs/dy	Tons/yr	Lbs/dy	Tons/yr	Lbs/dy	Tons/yr	Lbs/dy		
H. A. Wagner Unit 1 5-0489		Nat. Gas	S	0.689	13.6	0.306	6.06	0.264	5.23	0.878	17.4	101	C3
			F										
H. A. Wagner Unit 2 3-0017		Nat. Gas / Bit. Coal	S	3.15	146.51	2.14	99.5	0.940	43.7	3.14	146	43	C1, C3
			F										
H. A. Wagner Unit 3 3-0003		Nat. Gas / Bit. Coal	S	8.41	295	5.64	198	2.44	85.6	24.4	856	57	C1, C3
			F										
H. A. Wagner Unit 4 4-0017		Nat. Gas / No. 6 Oil	S	1.34	223	1.23	205	0.314	52.3	0.095	15.8	12	C1, C3
			F										
H. A. Wagner CT 4-0007		No. 2 Oil	S	0.005	2.00	0.005	2.00	0.005	2.00	0.008	3.20	5	C3
			F										
HAW Coal & Fly Ash Handling 6-1144		N/A	S	Source PM from H.A. Wagner MH Calculation sheet are included in Fugitive values for entry into Tempo									
			F	2.64	69.5	1.17	30.8	0.036	0.947	N/A	N/A	76	C2, C3, C4
			S										
			F										
			S										
			F										
			S										
			F										
			S										
			F										
<b>Total</b>				34.9	961.0	23.0	697.0	8.8	259.3	75.6	1,546.4		

Totals above include emissions from previous page.

S - Stack Emissions

F - Fugitive Emissions

Daily emissions (lbs/day) are lbs/operating day of the source

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel (see attached calculations for separate fuel emissions).

Emission Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3-User calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operation ceased
- C8-Computer calculated based on standard

FORM 4:

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Acetaldehyde\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr. No. 1 4-0507	N/A				
Brandon Shores Aux. Blr. No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	1.04E-01	1.66	0.078	None	
Brandon Shores Unit 2 3-0016	1.98E-01	1.84	0.082	None	
Brandon Shores Quench Pumps 9-0988	7.95E-05	3.31E-03	2.76E-03	None	
H. A. Wagner Unit 1 5-0489	N/A				
H. A. Wagner Unit 2 3-0017	2.69E-03	0.125	0.007	None	
H. A. Wagner Unit 3 3-0003	1.96E-02	0.688	0.039	None	
H. A. Wagner Unit 4 4-0017	N/A				
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>		3.24E-01	4.316	0.209	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Acrolein\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr. No. 1 4-0507	N/A				
Brandon Shores Aux. Blr. No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	5.25E-02	0.840	0.039	None	
Brandon Shores Unit 2 3-0016	1.01E-01	0.940	0.042	None	
Brandon Shores Quench Pumps 9-0988	9.60E-06	4.00E-04	0.000	None	
H. A. Wagner Unit 1 5-0489	N/A				
H. A. Wagner Unit 2 3-0017	1.37E-03	0.064	0.004	None	
H. A. Wagner Unit 3 3-0003	1.00E-02	0.351	0.020	None	
H. A. Wagner Unit 4 4-0017	N/A				
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>		1.65E-01	2.20	0.105	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Arsenic (As)\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr. No. 1 4-0507	3.87E-06	4.30E-04	7.54E-05	None	
Brandon Shores Aux. Blr. No. 2 4-0508	0.00	0.00	0.00	None	
Brandon Shores Unit 1 3-0015	1.55E-03	0.025	0.001	ESP, S, O	99.6, 99, 85
Brandon Shores Unit 2 3-0016	2.67E-03	0.025	0.001	ESP, S, O	99.6, 99, 85
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	2.40E-04	4.75E-03	2.69E-04	ESP, O	99.7, 85
H. A. Wagner Unit 2 3-0017	1.93E-03	0.090	0.005	ESP, O	99.9, 85
H. A. Wagner Unit 3 3-0003	1.41E-02	0.495	0.028	ESP, O	99.9, 85
H. A. Wagner Unit 4 4-0017	5.58E-04	0.093	0.007	O	50
H. A. Wagner Comb. Turbine 4-0007	1.23E-05	4.92E-03	2.73E-03	None	
<b>TOTALS</b>		2.11E-02	0.738	0.045	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Benzene \*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr. No. 1 4-0507	N/A				
Brandon Shores Aux. Blr. No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	2.36E-01	3.776	0.176	None	
Brandon Shores Unit 2 3-0016	4.51E-01	4.195	0.187	None	
Brandon Shores Quench Pumps 9-0988	9.65E-05	4.02E-03	3.35E-03	None	
H. A. Wagner Unit 1 5-0489	3.23E-04	6.40E-03	3.61E-04	None	
H. A. Wagner Unit 2 3-0017	6.15E-03	0.286	0.016	None	
H. A. Wagner Unit 3 3-0003	4.48E-02	1.572	0.090	None	
H. A. Wagner Unit 4 4-0017	1.19E-04	1.98E-02	1.47E-03	None	
H. A. Wagner Comb. Turbine 4-0007	6.15E-05	2.46E-02	1.37E-02	None	
<b>TOTALS</b>	7.39E-01	9.884	0.488		

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device

- S = Scrubber
- B = Baghouse
- ESP = Electrostatic Precipitator
- A = Afterburner
- C = Condenser
- AD = Adsorbtion
- O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: Benzyl chloride\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr. No. 1 4-0507	N/A				
Brandon Shores Aux. Blr. No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	1.27E-01	2.032	0.095	None	
Brandon Shores Unit 2 3-0016	2.43E-01	2.260	0.101	None	
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	N/A				
H. A. Wagner Unit 2 3-0017	3.00E-03	0.140	0.008	None	
H. A. Wagner Unit 3 3-0003	2.41E-02	0.846	0.048	None	
H. A. Wagner Unit 4 4-0017	N/A				
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>		3.97E-01	5.278	0.252	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbition  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Berylium (Be)\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr. No. 1 4-0507	2.90E-06	3.22E-04	5.65E-05	None	
Brandon Shores Aux. Blr. No. 2 4-0508	0.00	0.00	0.00	None	
Brandon Shores Unit 1 3-0015	5.48E-04	8.77E-03	4.10E-04	ESP, S, O	99.6, 99, 85
Brandon Shores Unit 2 3-0016	8.30E-04	7.72E-03	3.45E-04	ESP, S, O	99.6, 99, 85
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	6.12E-06	1.21E-04	6.85E-06	ESP, O	99.7, 85
H. A. Wagner Unit 2 3-0017	9.93E-05	4.62E-03	2.64E-04	ESP, O	99.9, 85
H. A. Wagner Unit 3 3-0003	7.25E-04	2.54E-02	1.45E-03	ESP, O	99.9, 85
H. A. Wagner Unit 4 4-0017	1.19E-05	1.98E-03	1.47E-04	O	50
H. A. Wagner Comb. Turbine 4-0007	3.47E-07	1.39E-04	7.71E-05	None	
<b>TOTALS</b>		2.22E-03	4.91E-02	2.76E-03	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)



**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Cadmium (Cd)\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr. No. 1 4-0507	2.90E-06	3.22E-04	5.65E-05	None	
Brandon Shores Aux. Blr. No. 2 4-0508	0.00	0.00	0.00	None	
Brandon Shores Unit 1 3-0015	6.60E-04	1.06E-02	4.93E-04	ESP, S, O	99.6, 99, 85
Brandon Shores Unit 2 3-0016	1.04E-03	9.67E-03	4.32E-04	ESP, S, O	99.6, 99, 85
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	2.15E-04	4.26E-03	2.41E-04	ESP, O	99.7, 85
H. A. Wagner Unit 2 3-0017	2.66E-04	1.24E-02	7.07E-04	ESP, O	99.9, 85
H. A. Wagner Unit 3 3-0003	1.78E-03	6.25E-02	3.57E-03	ESP, O	99.9, 85
H. A. Wagner Unit 4 4-0017	1.82E-04	3.03E-02	2.25E-03	O	50
H. A. Wagner Comb. Turbine 4-0007	5.35E-06	2.14E-03	1.19E-03	None	
<b>TOTALS</b>	4.15E-03	0.132	0.009		

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)



**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Chloroform \*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr. No. 1 4-0507	N/A				
Brandon Shores Aux. Blr. No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	1.07E-02	0.171	0.008	ESP, S, O	99.6, 99, 85
Brandon Shores Unit 2 3-0016	2.05E-02	0.191	0.009	ESP, S, O	99.6, 99, 85
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	N/A				
H. A. Wagner Unit 2 3-0017	2.78E-04	0.013	0.001	ESP, O	99.9, 85
H. A. Wagner Unit 3 3-0003	2.03E-03	0.071	0.004	ESP, O	99.9, 85
H. A. Wagner Unit 4 4-0017	N/A				
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>	3.35E-02	0.446	0.022		

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbition  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: Chromium (Cr)\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	2.90E-06	3.22E-04	5.65E-05	None	
Brandon Shores Aux. Blr No. 2 4-0508	0.00	0.00	0.00	None	
Brandon Shores Unit 1 3-0015	3.51E-03	5.62E-02	2.62E-03	ESP, S, O	99.6, 99, 85
Brandon Shores Unit 2 3-0016	6.50E-03	6.05E-02	2.70E-03	ESP, S, O	99.6, 99, 85
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	3.28E-04	6.50E-03	3.67E-04	ESP, O	99.7, 85
H. A. Wagner Unit 2 3-0017	1.26E-03	5.86E-02	3.35E-03	ESP, O	99.9, 85
H. A. Wagner Unit 3 3-0003	8.98E-03	3.15E-01	1.80E-02	ESP, O	99.9, 85
H. A. Wagner Unit 4 4-0017	3.74E-04	6.23E-02	4.62E-03	O	50
H. A. Wagner Comb. Turbine 4-0007	1.23E-05	4.92E-03	2.73E-03	None	
<b>TOTALS</b>		2.10E-02	0.564	0.034	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: Chromium VI\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	N/A				
Brandon Shores Aux. Blr No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	1.44E-02	2.30E-01	1.08E-02	ESP, S, O	99.6, 99, 85
Brandon Shores Unit 2 3-0016	2.74E-02	2.55E-01	1.14E-02	ESP, S, O	99.6, 99, 85
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	3.99E-05	7.90E-04	4.46E-05	ESP, O	99.7, 85
H. A. Wagner Unit 2 3-0017	3.72E-04	1.73E-02	9.89E-04	ESP, O	99.9, 85
H. A. Wagner Unit 3 3-0003	2.72E-03	9.54E-02	5.45E-03	ESP, O	99.9, 85
H. A. Wagner Unit 4 4-0017	1.04E-04	1.73E-02	1.28E-03	O	50
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>		4.50E-02	0.616	0.030	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Cobalt\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	N/A				
Brandon Shores Aux. Blr No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	3.18E-04	0.005	0.000	ESP, S, O	99.6, 99, 85
Brandon Shores Unit 2 3-0016	6.05E-04	0.006	0.000	ESP, S, O	99.6, 99, 85
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	9.77E-04	1.93E-02	1.09E-03	ESP, O	99.7, 85
H. A. Wagner Unit 2 3-0017	4.73E-04	0.022	0.001	ESP, O	99.9, 85
H. A. Wagner Unit 3 3-0003	3.44E-03	0.121	0.007	ESP, O	99.9, 85
H. A. Wagner Unit 4 4-0017	2.53E-03	0.422	0.031	O	50
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>		8.34E-03	0.595	0.040	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbition  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Cyanide compounds\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	N/A				
Brandon Shores Aux. Blr No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	4.54E-01	7.264	0.339	None	
Brandon Shores Unit 2 3-0016	8.65E-01	8.047	0.359	None	
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	N/A				
H. A. Wagner Unit 2 3-0017	1.18E-02	0.549	0.031	None	
H. A. Wagner Unit 3 3-0003	8.60E-02	3.018	0.172	None	
H. A. Wagner Unit 4 4-0017	N/A				
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>		1.42E+00	18.878	0.901	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbition  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Dimethyl sulfate\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	N/A				
Brandon Shores Aux. Blr No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	8.70E-03	0.139	0.007	None	
Brandon Shores Unit 2 3-0016	1.67E-02	0.155	0.007	None	
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	N/A				
H. A. Wagner Unit 2 3-0017	2.26E-04	0.011	0.001	None	
H. A. Wagner Unit 3 3-0003	1.65E-03	0.058	0.003	None	
H. A. Wagner Unit 4 4-0017	N/A				
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>		2.73E-02	0.363	0.018	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbition  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Ethyl chloride\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	N/A				
Brandon Shores Aux. Blr No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	7.60E-03	1.22E-01	5.68E-03	None	
Brandon Shores Unit 2 3-0016	1.46E-02	1.36E-01	6.06E-03	None	
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	N/A				
H. A. Wagner Unit 2 3-0017	1.98E-04	9.21E-03	5.26E-04	None	
H. A. Wagner Unit 3 3-0003	1.45E-03	5.09E-02	2.91E-03	None	
H. A. Wagner Unit 4 4-0017	N/A				
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>		2.38E-02	0.318	0.015	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)



**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Ethylene dichloride\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	N/A				
Brandon Shores Aux. Blr No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	7.25E-03	1.16E-01	5.42E-03	None	
Brandon Shores Unit 2 3-0016	1.39E-02	1.29E-01	5.77E-03	None	
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	N/A				
H. A. Wagner Unit 2 3-0017	1.89E-04	8.79E-03	5.02E-04	None	
H. A. Wagner Unit 3 3-0003	1.38E-03	4.84E-02	2.77E-03	None	
H. A. Wagner Unit 4 4-0017	N/A				
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>		2.27E-02	3.02E-01	1.45E-02	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)



**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Formaldehyde\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	0.00	0.00	0.00	None	
Brandon Shores Aux. Blr No. 2 4-0508	0.00	0.00	0.00	None	
Brandon Shores Unit 1 3-0015	4.36E-02	6.98E-01	3.26E-02	None	
Brandon Shores Unit 2 3-0016	8.30E-02	7.72E-01	3.45E-02	None	
Brandon Shores Quench Pumps 9-0988	1.23E-04	5.13E-03	4.27E-03	None	
H. A. Wagner Unit 1 5-0489	1.56E-02	3.09E-01	1.75E-02	None	
H. A. Wagner Unit 2 3-0017	2.88E-03	1.34E-01	7.65E-03	None	
H. A. Wagner Unit 3 3-0003	9.93E-03	3.48E-01	1.99E-02	None	
H. A. Wagner Unit 4 4-0017	1.49E-02	2.48E+00	1.84E-01	None	
H. A. Wagner Comb. Turbine 4-0007	3.14E-04	1.26E-01	6.98E-02	None	
<b>TOTALS</b>		1.70E-01	4.87E+00	3.70E-01	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Hydrochloric acid\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control	%
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	N/A				
Brandon Shores Aux. Blr No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	2.15E+00	34.4	1.61	S	99
Brandon Shores Unit 2 3-0016	3.00E+00	27.9	1.25	S	99
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	5.55E-02	1.10	0.062	None	
H. A. Wagner Unit 2 3-0017	8.90E-01	41.4	2.37	None	
H. A. Wagner Unit 3 3-0003	2.65E+00	93.0	5.31	None	
H. A. Wagner Unit 4 4-0017	8.75E-02	14.6	32.7	None	
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>		<b>8.83E+00</b>	<b>212.4</b>	<b>43.3</b>	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4:

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: Hydrogen fluoride\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control	%
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	N/A				
Brandon Shores Aux. Blr No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	9.50E-01	15.20	0.710	S	99
Brandon Shores Unit 2 3-0016	1.27E+00	11.81	0.527	S	99
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	6.00E-03	0.119	0.007	None	
H. A. Wagner Unit 2 3-0017	7.05E-01	32.79	1.87	None	
H. A. Wagner Unit 3 3-0003	5.15E+00	180.70	10.33	None	
H. A. Wagner Unit 4 4-0017	1.25E-02	2.08	0.154	None	
H. A. Wagner Comb. Turbine 4-0007	N/A				
TOTALS	8.09E+00	242.70	13.60		

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4:

TOXIC AIR POLLUTANTS

Calendar Year: 2019

EMISSIONS CERTIFICATION REPORT

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: Manganese\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control	%
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	5.80E-06	6.44E-04	1.13E-04	None	
Brandon Shores Aux. Blr No. 2 4-0508	0.00	0.00	0.00	None	
Brandon Shores Unit 1 3-0015	2.15E-02	3.44E-01	1.61E-02	ESP, S	99.6, 99
Brandon Shores Unit 2 3-0016	4.10E-02	3.81E-01	1.70E-02	ESP, S	99.6, 99
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	5.34E-04	1.06E-02	5.97E-04	ESP	99.7
H. A. Wagner Unit 2 3-0017	2.32E-03	1.08E-01	6.17E-03	ESP	99.9
H. A. Wagner Unit 3 3-0003	1.69E-02	5.93E-01	3.39E-02	ESP	99.9
H. A. Wagner Unit 4 4-0017	1.27E-03	2.12E-01	1.57E-02	O	50
H. A. Wagner Comb. Turbine 4-0007	8.85E-04	3.54E-01	1.97E-01	None	
TOTALS	8.44E-02	2.00	0.29		

\* Please attach all calculations.  
 \* See Attachment 1 for the minimum reporting values.  
 \*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4:

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: Mercury (Hg)\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control	%
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	2.90E-06	3.22E-04	5.65E-05	None	
Brandon Shores Aux. Blr No. 2 4-0508	0.00	0.00	0.00	None	
Brandon Shores Unit 1 3-0015	2.25E-03	3.60E-02	1.68E-03	B, O	99, 85
Brandon Shores Unit 2 3-0016	3.65E-03	3.40E-02	1.52E-03	B, O	99, 85
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	5.39E-05	1.07E-03	6.03E-05	None	
H. A. Wagner Unit 2 3-0017	1.59E-06	7.40E-05	4.23E-06	ESP, O	99.9, 85
H. A. Wagner Unit 3 3-0003	1.45E-04	5.09E-03	2.91E-04	ESP, O	99.9, 85
H. A. Wagner Unit 4 4-0017	5.09E-05	8.48E-03	6.28E-04	None	
H. A. Wagner Comb. Turbine 4-0007	1.35E-06	5.40E-04	3.00E-04	None	
<b>TOTALS</b>	6.16E-03	8.56E-02	4.54E-03		

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4:

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: Methyl bromide\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions				
	Tons/yr	Lbs/day	Lbs/hr	Control	%
Brandon Shores Aux. Blr No. 1 4-0507	N/A				
Brandon Shores Aux. Blr No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	2.91E-02	0.466	0.022	None	
Brandon Shores Unit 2 3-0016	5.55E-02	0.516	0.023	None	
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	N/A				
H. A. Wagner Unit 2 3-0017	7.55E-04	0.035	0.002	None	
H. A. Wagner Unit 3 3-0003	5.50E-03	0.193	0.011	None	
H. A. Wagner Unit 4 4-0017	N/A				
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>	9.09E-02	1.210	0.058		

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: Methyl chloride\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions				
	Tons/yr	Lbs/day	Lbs/hr	Control	%
Brandon Shores Aux. Blr No. 1 4-0507	N/A				
Brandon Shores Aux. Blr No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	9.60E-02	1.536	0.072	None	
Brandon Shores Unit 2 3-0016	1.84E-01	1.712	0.076	None	
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	N/A				
H. A. Wagner Unit 2 3-0017	2.50E-03	0.116	0.007	None	
H. A. Wagner Unit 3 3-0003	1.83E-02	0.642	0.037	None	
H. A. Wagner Unit 4 4-0017	N/A				
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>		3.01E-01	4.006	0.192	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)



**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Methyl hydrazine \*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions				
	Tons/yr	Lbs/day	Lbs/hr	Control	%
Brandon Shores Aux. Blr No. 1 4-0507	N/A				
Brandon Shores Aux. Blr No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	3.09E-02	4.94E-01	2.31E-02	None	
Brandon Shores Unit 2 3-0016	5.90E-02	5.49E-01	2.45E-02	None	
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	N/A				
H. A. Wagner Unit 2 3-0017	8.00E-04	3.72E-02	2.13E-03	None	
H. A. Wagner Unit 3 3-0003	5.85E-03	2.05E-01	1.17E-02	None	
H. A. Wagner Unit 4 4-0017	N/A				
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>		9.66E-02	1.29E+00	6.14E-02	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)



FORM 4:

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468

Pollutant: Nickel (Ni) \*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control	%
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	2.90E-06	3.22E-04	5.65E-05	None	
Brandon Shores Aux. Blr No. 2 4-0508	0.00	0.00	0.00	None	
Brandon Shores Unit 1 3-0015	9.14E-03	1.46E-01	6.83E-03	ESP, S, B	99.6, 99, 99
Brandon Shores Unit 2 3-0016	1.72E-02	1.60E-01	7.14E-03	ESP, S, B	99.6, 99, 99
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	1.39E-02	2.75E-01	1.56E-02	ESP	99.7
H. A. Wagner Unit 2 3-0017	1.37E-03	6.37E-02	3.64E-03	ESP	99.9
H. A. Wagner Unit 3 3-0003	9.70E-03	3.40E-01	1.94E-02	ESP	99.9
H. A. Wagner Unit 4 4-0017	3.55E-02	5.92E+00	4.38E-01	O	50
H. A. Wagner Comb. Turbine 4-0007	5.15E-06	2.06E-03	1.14E-03	None	
<b>TOTALS</b>	8.68E-02	6.91E+00	4.92E-01		

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4:

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: Phosphorous\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions				
	Tons/yr	Lbs/day	Lbs/hr	Control	%
Brandon Shores Aux. Blr No. 1 4-0507	N/A				
Brandon Shores Aux. Blr No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	N/A				
Brandon Shores Unit 2 3-0016	N/A				
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	1.52E-03	3.01E-02	1.70E-03	None	
H. A. Wagner Unit 2 3-0017	N/A				
H. A. Wagner Unit 3 3-0003	N/A				
H. A. Wagner Unit 4 4-0017	3.97E-03	6.62E-01	4.90E-02	None	
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>	5.49E-03	6.92E-01	5.07E-02		

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4:

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: Propionaldehyde\*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions				
	Tons/yr	Lbs/day	Lbs/hr	Control	%
Brandon Shores Aux. Blr No. 1 4-0507	N/A				
Brandon Shores Aux. Blr No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	6.90E-02	1.10E+00	5.16E-02	None	
Brandon Shores Unit 2 3-0016	1.32E-01	1.23E+00	5.48E-02	None	
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	N/A				
H. A. Wagner Unit 2 3-0017	1.79E-03	8.33E-02	4.76E-03	None	
H. A. Wagner Unit 3 3-0003	1.31E-02	4.60E-01	2.63E-02	None	
H. A. Wagner Unit 4 4-0017	N/A				
H. A. Wagner Comb. Turbine 4-0007	N/A				
<b>TOTALS</b>	2.16E-01	2.87E+00	1.37E-01		

\* Please attach all calculations.  
 \* See Attachment 1 for the minimum reporting values.  
**\*\*Control Device**  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: Selenium \*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	1.45E-05	1.61E-03	2.83E-04	None	
Brandon Shores Aux. Blr No. 2 4-0508	0.00	0.00	0.00	None	
Brandon Shores Unit 1 3-0015	7.37E-03	1.18E-01	5.51E-03	ESP, S, O	99.6, 99, 85
Brandon Shores Unit 2 3-0016	1.30E-02	1.21E-01	5.40E-03	ESP, S, O	99.6, 99, 85
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	1.13E-04	2.24E-03	1.26E-04	ESP	99.7, 85
H. A. Wagner Unit 2 3-0017	6.10E-03	2.84E-01	1.62E-02	ESP	99.9, 85
H. A. Wagner Unit 3 3-0003	4.48E-02	1.57E+00	8.98E-02	ESP	99.9, 85
H. A. Wagner Unit 4 4-0017	2.87E-04	4.78E-02	3.54E-03	O	50
H. A. Wagner Comb. Turbine 4-0007	2.80E-05	1.12E-02	6.22E-03	None	
<b>TOTALS</b>		7.17E-02	2.16E+00	1.27E-01	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 4:**

**TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: Total PCDD/PCDF \*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions			Control Device **	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Brandon Shores Aux. Blr No. 1 4-0507	N/A				
Brandon Shores Aux. Blr No. 2 4-0508	N/A				
Brandon Shores Unit 1 3-0015	4.43E-05	7.09E-04	3.31E-05	None	
Brandon Shores Unit 2 3-0016	8.45E-05	7.86E-04	3.51E-05	None	
Brandon Shores Quench Pumps 9-0988	N/A				
H. A. Wagner Unit 1 5-0489	N/A				
H. A. Wagner Unit 2 3-0017	8.30E-09	3.86E-07	2.21E-08	None	
H. A. Wagner Unit 3 3-0003	6.05E-08	2.12E-06	1.21E-07	None	
H. A. Wagner Unit 4 4-0017	N/A				
H. A. Wagner Comb. Turbine 4-0007	N/A				
TOTALS		1.29E-04	1.50E-03	6.83E-05	

\* Please attach all calculations.

\* See Attachment 1 for the minimum reporting values.

\*\*Control Device  
 S = Scrubber  
 B = Baghouse  
 ESP = Electrostatic Precipitator  
 A = Afterburner  
 C = Condenser  
 AD = Adsorbtion  
 O = Other

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**FORM 5:**

**BILLABLE TOXIC AIR POLLUTANTS**

Calendar Year: 2019

**Emissions Certification Report**

Facility Name: Fort Smallwood Complex Facility ID#: 24-003-00468

Chemical Name	CAS Number		Actual Emissions			Estimation Method
			Tons/yr	Lbs/day	Lbs/hr	
carbon disulfide	75-15-0	S	Below Reporting Threshold			C3
		F				
carbonyl sulfide	463-58-1	S	Pollutant Not Produced			
		F				
chlorine	7782-50-5	S	Pollutant Not Produced			
		F				
cyanide compounds	57-12-5	S	1.42	18.88	0.90	C3
		F				
hydrochloric acid	7647-01-0	S	9	212	43	C1, C3
		F				
hydrogen fluoride	7664-39-3	S	8.09	243	13.60	C1, C3
		F				
methyl chloroform	71-55-6	S	Pollutant Not Produced			
		F				
methylene chloride	75-09-2	S	Below Reporting Threshold			C3
		F				
perchloroethylene	127-18-4	S	Pollutant Not Produced			
		F				
phosphine	7803-51-2	S	Pollutant Not Produced			
		F				
titanium tetrachloride	7550-45-0	S	Pollutant Not Produced			
		F				
TOTALS			18.5	473.9	57.5	

**Emission Estimation Method**

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify
  
- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3-User calculated based on AP-42
- C4-User calculated by engineering judgment
- C5-User calculated based on a State or local agency factor
- C6-New construction, not operational
- C7-Source closed, operation ceased
- C8-Computer calculated based on standards

This form is to include only the chemicals identified.

S-Stack Emissions F-Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source

PLEASE NOTE: Be sure to attach all data and calculations necessary to support the emissions figures shown above.

**FORM 6: Greenhouse Gases**

**GREENHOUSE GAS AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: CO<sub>2</sub> \*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions		
	Tons/yr	Lbs/day	Lbs/hr
Brandon Shores Aux. Blr No. 1 4-0507	159	17,667	3,099
Brandon Shores Aux. Blr No. 2 4-0508	0.0	0.0	0.0
Brandon Shores Unit 1 3-0015	1,000,841	16,013,456	748,292
Brandon Shores Unit 2 3-0016	1,821,489	16,944,084	756,432
Brandon Shores Quench Pumps 9-0988	17	708	590
H. A. Wagner Unit 1 5-0489	23,383	463,030	26,160
H. A. Wagner Unit 2 3-0017	24,457	1,137,535	65,002
H. A. Wagner Unit 3 3-0003	164,813	5,782,912	330,452
H. A. Wagner Unit 4 4-0017	12,241	2,040,167	151,123
H. A. Wagner Comb. Turbine 4-0007	184	73,600	40,889
<b>TOTALS</b>	<b>3,047,584</b>	<b>42,473,159</b>	<b>2,122,039</b>

This form must be used to report Greenhouse gas emissions:

- carbon dioxide (CO<sub>2</sub>)
- methane (CH<sub>4</sub>)
- nitrous oxide (N<sub>2</sub>O)
- hydrofluorocarbons (HFCs)
- perfluorocarbons (PFCs)
- sulfur hexafluoride (SF<sub>6</sub>)

\* Use a separate form for each pollutant

\* Please attach all calculations

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)



**FORM 6: Greenhouse Gases**

**GREENHOUSE GAS AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: CH<sub>4</sub> \*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions		
	Tons/yr	Lbs/day	Lbs/hr
Brandon Shores Aux. Blr No. 1 4-0507	0.0	0.0	0.0
Brandon Shores Aux. Blr No. 2 4-0508	0.0	0.0	0.0
Brandon Shores Unit 1 3-0015	115.5	1848.0	86.4
Brandon Shores Unit 2 3-0016	219.9	2045.6	91.3
Brandon Shores Quench Pumps 9-0988	0.0	0.0	0.0
H. A. Wagner Unit 1 5-0489	0.4	7.9	0.4
H. A. Wagner Unit 2 3-0017	2.6	120.9	6.9
H. A. Wagner Unit 3 3-0003	20.3	712.3	40.7
H. A. Wagner Unit 4 4-0017	0.5	83.3	6.2
H. A. Wagner Comb. Turbine 4-0007	0.0	N/A	N/A
<b>TOTALS</b>	<b>359.2</b>	<b>4818.0</b>	<b>231.9</b>

This form must be used to report Greenhouse gas emissions:

- carbon dioxide (CO<sub>2</sub>)
- methane (CH<sub>4</sub>)
- nitrous oxide (N<sub>2</sub>O)
- hydrofluorocarbons (HFCs)
- perfluorocarbons (PFCs)
- sulfur hexafluoride (SF<sub>6</sub>)

\* Use a separate form for each pollutant

\* Please attach all calculations

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)



**FORM 6: Greenhouse Gases**

**GREENHOUSE GAS AIR POLLUTANTS**

Calendar Year: 2019

**EMISSIONS CERTIFICATION REPORT**

Facility Name: Fort Smallwood Complex Facility ID: 24-003-00468 Pollutant: N<sub>2</sub>O \*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions		
	Tons/yr	Lbs/day	Lbs/hr
Brandon Shores Aux. Blr No. 1 4-0507	0.00	0.00	0.00
Brandon Shores Aux. Blr No. 2 4-0508	0.00	0.00	0.00
Brandon Shores Unit 1 3-0015	16.8	268.8	12.6
Brandon Shores Unit 2 3-0016	32.0	297.7	13.3
Brandon Shores Quench Pumps 9-0988	N/A	N/A	N/A
H. A. Wagner Unit 1 5-0489	0.03	0.59	0.03
H. A. Wagner Unit 2 3-0017	0.4	18.6	1.1
H. A. Wagner Unit 3 3-0003	3.0	105.3	6.0
H. A. Wagner Unit 4 4-0017	0.1	16.7	1.2
H. A. Wagner Comb. Turbine 4-0007	0.00	0.0	0.0
<b>TOTALS</b>	<b>52.3</b>	<b>707.7</b>	<b>34.2</b>

This form must be used to report Greenhouse gas emissions:

- carbon dioxide (CO<sub>2</sub>)
- methane (CH<sub>4</sub>)
- nitrous oxide (N<sub>2</sub>O)
- hydrofluorocarbons (HFCs)
- perfluorocarbons (PFCs)
- sulfur hexafluoride (SF<sub>6</sub>)

\* Use a separate form for each pollutant

\* Please attach all calculations

<sup>1</sup>Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

# Coal Fired Boilers HAPs Calculations for RY 2019

**Facility Name:** Fort Smallwood Complex  
**Facility ID:** 24-003-00468  
**Equipment Description:**  
**Registration #:**  
**Coal Usage in Tons:**

BS Unit 1	BS Unit 2	HAW Unit 2	HAW Unit 3
3-0015	3-0016	3-0017	3-0003
362,965	692,976	9,418	68,832

Pollutant	AP-42 EF	Pounds	Tons	Pounds	Tons	Pounds	Tons	Pounds	Tons	Fuel Total Tons
	lb/Ton									
1,1,1-Trichloroethane	2.00E-05	7.26E+00	3.63E-03	1.39E+01	6.95E-03	1.88E-01	9.40E-05	1.38E+00	6.90E-04	1.14E-02
2,4-Dinitrotoluene	2.80E-07	1.02E-01	5.10E-05	1.94E-01	9.70E-05	2.64E-03	1.32E-06	1.93E-02	9.65E-06	1.59E-04
2-Chloroacetophenone	7.00E-06	2.54E+00	1.27E-03	4.85E+00	2.43E-03	6.59E-02	3.30E-05	4.82E-01	2.41E-04	3.97E-03
Acenaphthene	5.10E-07	1.85E-01	9.25E-05	3.53E-01	1.77E-04	4.80E-03	2.40E-06	3.51E-02	1.76E-05	2.90E-04
Acenaphthylene	2.50E-07	9.07E-02	4.54E-05	1.73E-01	8.65E-05	2.35E-03	1.18E-06	1.72E-02	8.60E-06	1.42E-04
Acetaldehyde	5.70E-04	2.07E+02	1.04E-01	3.95E+02	1.98E-01	5.37E+00	2.69E-03	3.92E+01	1.96E-02	3.24E-01
Acetophenone	1.50E-05	5.44E+00	2.72E-03	1.04E+01	5.20E-03	1.41E-01	7.05E-05	1.03E+00	5.15E-04	8.51E-03
Acrolein	2.90E-04	1.05E+02	5.25E-02	2.01E+02	1.01E-01	2.73E+00	1.37E-03	2.00E+01	1.00E-02	1.65E-01
Anthracene	2.10E-07	7.62E-02	3.81E-05	1.46E-01	7.30E-05	1.98E-03	9.90E-07	1.45E-02	7.25E-06	1.19E-04
Antimony	1.80E-05	2.45E+00	1.23E-03	4.67E+00	2.34E-03	1.70E-01	8.50E-05	1.24E+00	6.20E-04	4.28E-03
Arsenic (As)	4.10E-04	2.45E+00	1.23E-03	4.67E+00	2.34E-03	3.86E+00	1.93E-03	2.82E+01	1.41E-02	1.96E-02
Benzene	1.30E-03	4.72E+02	2.36E-01	9.01E+02	4.51E-01	1.22E+01	6.10E-03	8.95E+01	4.48E-02	7.38E-01
Benzo(a)anthracene	8.00E-08	2.90E-02	1.45E-05	5.54E-02	2.77E-05	7.53E-04	3.77E-07	5.51E-03	2.76E-06	4.53E-05
Benzo(a)pyrene	3.80E-08	1.38E-02	6.90E-06	2.63E-02	1.32E-05	3.58E-04	1.79E-07	2.62E-03	1.31E-06	2.16E-05
Benzo(b,j,k)fluoranthene	1.10E-07	3.99E-02	2.00E-05	7.62E-02	3.81E-05	1.04E-03	5.20E-07	7.57E-03	3.79E-06	6.24E-05
Benzo(g,h,i)perylene	2.70E-08	9.80E-03	4.90E-06	1.87E-02	9.35E-06	2.54E-04	1.27E-07	1.86E-03	9.30E-07	1.53E-05
Benzyl chloride	7.00E-04	2.54E+02	1.27E-01	4.85E+02	2.43E-01	6.59E+00	3.30E-03	4.82E+01	2.41E-02	3.97E-01
Beryllium (Be)	2.10E-05	6.10E-01	3.05E-04	1.17E+00	5.85E-04	1.98E-01	9.90E-05	1.45E+00	7.25E-04	1.71E-03
Biphenyl	1.70E-06	6.17E-01	3.09E-04	1.18E+00	5.90E-04	1.60E-02	8.00E-06	1.17E-01	5.85E-05	9.66E-04
Bis(2-ethylhexyl)phthalate (DEHP)	7.30E-05	2.65E+01	1.33E-02	5.06E+01	2.53E-02	6.88E-01	3.44E-04	5.02E+00	2.51E-03	4.15E-02
Bromoform	3.90E-05	1.42E+01	7.10E-03	2.70E+01	1.35E-02	3.67E-01	1.84E-04	2.68E+00	1.34E-03	2.21E-02
Cadmium (Cd)	5.10E-05	8.34E-01	4.17E-04	1.59E+00	7.95E-04	4.80E-01	2.40E-04	3.51E+00	1.76E-03	3.21E-03
Carbon disulfide	1.30E-04	4.72E+01	2.36E-02	9.01E+01	4.51E-02	1.22E+00	6.10E-04	8.95E+00	4.48E-03	7.38E-02
Chlorobenzene	2.20E-05	7.99E+00	4.00E-03	1.52E+01	7.60E-03	2.07E-01	1.04E-04	1.51E+00	7.55E-04	1.25E-02
Chloroform	5.90E-05	2.14E+01	1.07E-02	4.09E+01	2.05E-02	5.56E-01	2.78E-04	4.06E+00	2.03E-03	3.35E-02
Chromium	2.60E-04	6.53E+00	3.27E-03	1.25E+01	6.25E-03	2.45E+00	1.23E-03	1.79E+01	8.95E-03	1.97E-02
Chromium (VI)	7.90E-05	2.87E+01	1.44E-02	5.47E+01	2.74E-02	7.44E-01	3.72E-04	5.44E+00	2.72E-03	4.49E-02
Chrysene	1.00E-07	3.63E-02	1.82E-05	6.93E-02	3.47E-05	9.42E-04	4.71E-07	6.88E-03	3.44E-06	5.68E-05
Cobalt	1.00E-04	6.36E-01	3.18E-04	1.21E+00	6.05E-04	9.42E-01	4.71E-04	6.88E+00	3.44E-03	4.83E-03
Cumene	5.30E-06	1.92E+00	9.60E-04	3.67E+00	1.84E-03	4.99E-02	2.50E-05	3.65E-01	1.83E-04	3.01E-03
Cyanide compounds	2.50E-03	9.07E+02	4.54E-01	1.73E+03	8.65E-01	2.35E+01	1.18E-02	1.72E+02	8.60E-02	1.42E+00
Dimethyl sulfate	4.80E-05	1.74E+01	8.70E-03	3.33E+01	1.67E-02	4.52E-01	2.26E-04	3.30E+00	1.65E-03	2.73E-02

# Coal Fired Boilers HAPs Calculations for RY 2019

**Facility Name:** Fort Smallwood Complex  
**Facility ID:** 24-003-00468  
**Equipment Description:**  
**Registration #:**  
**Coal Usage in Tons:**

BS Unit 1	BS Unit 2	HAW Unit 2	HAW Unit 3
3-0015	3-0016	3-0017	3-0003
362,965	692,976	9,418	68,832

Pollutant	AP-42 EF	Pounds	Tons	Pounds	Tons	Pounds	Tons	Pounds	Tons	Fuel Total Tons
	lb/Ton									
Ethyl benzene	9.40E-05	3.41E+01	1.71E-02	6.51E+01	3.26E-02	8.85E-01	4.43E-04	6.47E+00	3.24E-03	5.34E-02
Ethyl chloride	4.20E-05	1.52E+01	7.60E-03	2.91E+01	1.46E-02	3.96E-01	1.98E-04	2.89E+00	1.45E-03	2.38E-02
Ethylene dibromide	1.20E-06	4.36E-01	2.18E-04	8.32E-01	4.16E-04	1.13E-02	5.65E-06	8.26E-02	4.13E-05	6.81E-04
Ethylene dichloride	4.00E-05	1.45E+01	7.25E-03	2.77E+01	1.39E-02	3.77E-01	1.89E-04	2.75E+00	1.38E-03	2.27E-02
Fluoranthene	7.10E-07	2.58E-01	1.29E-04	4.92E-01	2.46E-04	6.69E-03	3.35E-06	4.89E-02	2.45E-05	4.03E-04
Fluorene	9.10E-07	3.30E-01	1.65E-04	6.31E-01	3.16E-04	8.57E-03	4.29E-06	6.26E-02	3.13E-05	5.17E-04
Formaldehyde	2.40E-04	8.71E+01	4.36E-02	1.66E+02	8.30E-02	2.26E+00	1.13E-03	1.65E+01	8.25E-03	1.36E-01
Hexane	6.70E-05	2.43E+01	1.22E-02	4.64E+01	2.32E-02	6.31E-01	3.16E-04	4.61E+00	2.31E-03	3.80E-02
Hydrochloric acid	1.20E+00	4.29E+03	2.15E+00	6.00E+03	3.00E+00	1.78E+03	8.90E-01	5.30E+03	2.65E+00	8.69E+00
Hydrogen fluoride	1.50E-01	1.90E+03	9.50E-01	2.53E+03	1.27E+00	1.41E+03	7.05E-01	1.03E+04	5.15E+00	8.08E+00
Indeno(1,2,3-cd)pyrene	6.10E-08	2.21E-02	1.11E-05	4.23E-02	2.12E-05	5.74E-04	2.87E-07	4.20E-03	2.10E-06	3.47E-05
Isophorone	5.80E-04	2.11E+02	1.06E-01	4.02E+02	2.01E-01	5.46E+00	2.73E-03	3.99E+01	2.00E-02	3.30E-01
Lead (Pb)	See lead calculation sheet for total coal lead emissions									
Manganese	4.90E-04	4.29E+01	2.15E-02	8.20E+01	4.10E-02	4.61E+00	2.31E-03	3.37E+01	1.69E-02	8.17E-02
Mercury (Hg)	See mercury CEMs data for total coal mercury emissions									
Methyl bromide	1.60E-04	5.81E+01	2.91E-02	1.11E+02	5.55E-02	1.51E+00	7.55E-04	1.10E+01	5.50E-03	9.09E-02
Methyl chloride	5.30E-04	1.92E+02	9.60E-02	3.67E+02	1.84E-01	4.99E+00	2.50E-03	3.65E+01	1.83E-02	3.01E-01
Methyl ethyl ketone	3.90E-04	1.42E+02	7.10E-02	2.70E+02	1.35E-01	3.67E+00	1.84E-03	2.68E+01	1.34E-02	2.21E-01
Methyl hydrazine	1.70E-04	6.17E+01	3.09E-02	1.18E+02	5.90E-02	1.60E+00	8.00E-04	1.17E+01	5.85E-03	9.66E-02
Methyl methacrylate	2.00E-05	7.26E+00	3.63E-03	1.39E+01	6.95E-03	1.88E-01	9.40E-05	1.38E+00	6.90E-04	1.14E-02
Methyl tert butyl ether	3.50E-05	1.27E+01	6.35E-03	2.43E+01	1.22E-02	3.30E-01	1.65E-04	2.41E+00	1.21E-03	1.99E-02
Methylene chloride	2.90E-04	1.05E+02	5.25E-02	2.01E+02	1.01E-01	2.73E+00	1.37E-03	2.00E+01	1.00E-02	1.65E-01
Naphthalene	1.30E-05	4.72E+00	2.36E-03	9.01E+00	4.51E-03	1.22E-01	6.10E-05	8.95E-01	4.48E-04	7.38E-03
Nickel (Ni)	2.80E-04	1.78E+01	8.90E-03	3.40E+01	1.70E-02	2.64E+00	1.32E-03	1.93E+01	9.65E-03	3.69E-02
Phenanthrene	2.70E-06	9.80E-01	4.90E-04	1.87E+00	9.35E-04	2.54E-02	1.27E-05	1.86E-01	9.30E-05	1.53E-03
Phenol	1.60E-05	5.81E+00	2.91E-02	1.11E+01	5.55E-03	1.51E-01	7.55E-05	1.10E+00	5.50E-04	9.09E-03
Propionaldehyde	3.80E-04	1.38E+02	6.90E-02	2.63E+02	1.32E-01	3.58E+00	1.79E-03	2.62E+01	1.31E-02	2.16E-01
Pyrene	3.30E-07	1.20E-01	6.00E-05	2.29E-01	1.15E-04	3.11E-03	1.56E-06	2.27E-02	1.14E-05	1.88E-04
Selenium	1.30E-03	1.23E+01	6.15E-03	2.35E+01	1.18E-02	1.22E+01	6.10E-03	8.95E+01	4.48E-02	6.89E-02
Styrene	2.50E-05	9.07E+00	4.54E-03	1.73E+01	8.65E-03	2.35E-01	1.18E-04	1.72E+00	8.60E-04	1.42E-02
Tetrachloroethylene	4.30E-05	1.56E+01	7.80E-03	2.98E+01	1.49E-02	4.05E-01	2.03E-04	2.96E+00	1.48E-03	2.44E-02
Toluene	2.40E-04	8.71E+01	4.36E-02	1.66E+02	8.30E-02	2.26E+00	1.13E-03	1.65E+01	8.25E-03	1.36E-01

# Coal Fired Boilers HAPs Calculations for RY 2019

**Facility Name:** Fort Smallwood Complex  
**Facility ID:** 24-003-00468  
**Equipment Description:**  
**Registration #:**  
**Coal Usage in Tons:**

BS Unit 1	BS Unit 2	HAW Unit 2	HAW Unit 3
3-0015	3-0016	3-0017	3-0003
362,965	692,976	9,418	68,832

Pollutant	AP-42 EF	Pounds	Tons	Pounds	Tons	Pounds	Tons	Pounds	Tons	Fuel Total Tons
	lb/Ton									
Total PCDD/PCDF (ESP or FF)	1.76E-09					1.66E-05	8.30E-09	1.21E-04	6.05E-08	6.88E-08
Total PCDD/PCDF (FGD-SDA with FF)	2.44E-07	8.86E-02	4.43E-05	1.69E-01	8.45E-05					1.29E-04
Vinyl acetate	7.60E-06	2.76E+00	1.38E-03	5.27E+00	2.64E-03	7.16E-02	3.58E-05	5.23E-01	2.62E-04	4.32E-03
Xylenes	3.70E-05	1.34E+01	6.70E-03	2.56E+01	1.28E-02	3.48E-01	1.74E-04	2.55E+00	1.28E-03	2.10E-02

**NOTES:**

1. Brandon Shores Unit 1 HCl emissions factor of 0.00017 lb/MMBtu is derived from quarterly stack test results performed in each operating quarter of 2019. Brandon Shores Unit 2 HCl emissions factor of 0.00021 lb/MMBtu is derived from quarterly stack test results performed in each operating quarter of 2019.
2. Brandon Shores Units 1 and 2 HF emissions are based upon an HF emissions factor 0.0001 lb/mmBtu derived from stack test results on Unit 1 dated November 11, 2014.
3. Factors taken from AP-42 Table 1.1-12 Emission Factors for Polychlorinated Dibenzo-P Dioxins and Polychlorinated Dibenzofurans from Controlled Bituminous and Sub-bituminous Coal Combustion
4. Factors taken from AP-42 Table 1.1-13 Emission Factors for Polynuclear Aromatic Hydrocarbons (PAH) from Controlled Coal Combustion
5. Factors taken from AP-42 TABLE 1.1-14. Emission Factors for Various Organic Compounds from Controlled Coal Combustion
6. Factors taken from AP-42 TABLE 1.1-18. Emission Factors for Trace Metals from Controlled Coal Combustion
7. Brandon Shores emission factors for Antimony, Arsenic, Beryllium, Cadmium, Chromium, Cobalt, Manganese, Nickel and Selenium are derived from Unit 2 stack test results dated October 25, 2011.
8. Wagner Unit 3 emissions from 2019 are from the HCl CEMS. Wagner Unit 2 emissions factor of 0.00300 lb/MMBtu is derived from quarterly stack test results performed in each operating quarter of 2019.



## Residual Oil (No. 6) Boiler HAPs Calculations for RY 2019

Facility Name: Fort Smallwood Complex  
 Facility ID: 24-003-00468  
 Equipment Description: HAW Unit 1  
 Registration No.: 5-0489  
 No. 6 Fuel Oil Usage Gallons: 321,181

Pollutant	AP-42 EF	HAW Unit 1		HAW Unit 4		Fuel Total Tons
	lbs/1,000 gal	Pounds	Tons	Pounds	Tons	
1,1,1-Trichloroethane	2.36E-04	7.58E-02	3.79E-05	1.98E-01	9.90E-05	1.37E-04
Acenaphthene	2.11E-05	6.78E-03	3.39E-06	1.77E-02	8.85E-06	1.22E-05
Acenaphthylene	2.53E-07	8.13E-05	4.07E-08	2.12E-04	1.06E-07	1.47E-07
Anthracene	1.22E-06	3.92E-04	1.96E-07	1.02E-03	5.10E-07	7.06E-07
Antimony	5.25E-03	1.69E+00	8.45E-04	4.40E+00	2.20E-03	3.05E-03
Arsenic (As)	1.32E-03	4.24E-01	2.12E-04	1.11E+00	5.55E-04	7.67E-04
Benzene	2.14E-04	6.87E-02	3.44E-05	1.80E-01	9.00E-05	1.24E-04
Benzo(a)anthracene	4.01E-06	1.29E-03	6.45E-07	3.36E-03	1.68E-06	2.33E-06
Benzo(b,k)fluoranthene	1.48E-06	4.75E-04	2.38E-07	1.24E-03	6.20E-07	8.58E-07
Benzo(g,h,i)perylene	2.26E-06	7.26E-04	3.63E-07	1.90E-03	9.50E-07	1.31E-06
Beryllium (Be)	2.78E-05	8.93E-03	4.47E-06	2.33E-02	1.17E-05	1.62E-05
Cadmium (Cd)	3.98E-04	1.28E-01	6.40E-05	3.34E-01	1.67E-04	2.31E-04
Chromium (Cr)	8.45E-04	2.71E-01	1.36E-04	7.09E-01	3.55E-04	4.91E-04
Chromium VI	2.48E-04	7.97E-02	3.99E-05	2.08E-01	1.04E-04	1.44E-04
Chrysene	2.38E-06	7.64E-04	3.82E-07	2.00E-03	1.00E-06	1.38E-06
Cobalt	6.02E-03	1.93E+00	9.65E-04	5.05E+00	2.53E-03	3.50E-03
Copper (Cu)	1.76E-03	5.65E-01	2.83E-04	1.48E+00	7.40E-04	1.02E-03
Dibenzo(a,h) anthracene	1.67E-06	5.36E-04	2.68E-07	1.40E-03	7.00E-07	9.68E-07
Ethylbenzene	6.36E-05	2.04E-02	1.02E-05	5.34E-02	2.67E-05	3.69E-05
Fluoranthene	4.84E-06	1.55E-03	7.75E-07	4.06E-03	2.03E-06	2.81E-06
Fluorene	4.47E-06	1.44E-03	7.20E-07	3.75E-03	1.88E-06	2.60E-06
Formaldehyde	3.30E-02	1.06E+01	5.30E-03	2.77E+01	1.39E-02	1.92E-02
Hydrochloric acid	3.47E-01	1.11E+02	5.55E-02	1.75E+02	8.75E-02	1.43E-01
Hydrogen Fluoride	3.73E-02	1.20E+01	6.00E-03	2.50E+01	1.25E-02	1.85E-02
Indeno(1,2,3-cd)pyrene	2.14E-06	6.87E-04	3.44E-07	1.80E-03	9.00E-07	1.24E-06
Lead (Pb)		See lead calculation sheet for total lead emissions				
Manganese (Mn)	3.00E-03	9.64E-01	4.82E-04	2.52E+00	1.26E-03	1.74E-03
Mercury (Hg)	1.13E-04	3.63E-02	1.82E-05	9.48E-02	4.74E-05	6.56E-05
Naphthalene	1.13E-03	3.63E-01	1.82E-04	9.48E-01	4.74E-04	6.56E-04
Nickel (Ni)	8.45E-02	2.71E+01	1.36E-02	7.09E+01	3.55E-02	4.91E-02
o-Xylene	1.09E-04	3.50E-02	1.75E-05	9.15E-02	4.58E-05	6.33E-05
Phenanthrene	1.05E-05	3.37E-03	1.69E-06	8.81E-03	4.41E-06	6.10E-06
Phosphorous	9.46E-03	3.04E+00	1.52E-03	7.94E+00	3.97E-03	5.49E-03
Pyrene	4.25E-06	1.37E-03	6.85E-07	3.57E-03	1.79E-06	2.48E-06
Selenium (Se)	6.83E-04	2.19E-01	1.10E-04	5.73E-01	2.87E-04	3.97E-04
Toluene	6.20E-03	1.99E+00	9.95E-04	5.20E+00	2.60E-03	3.60E-03
Vanadium	3.18E-02	1.02E+01	5.10E-03	2.67E+01	1.34E-02	1.85E-02
Zinc	2.91E-02	9.35E+00	4.68E-03	2.44E+01	1.22E-02	1.69E-02

NOTES:

- Unit 4 HCl and HF emissions factors (HCl: 0.0014 lb/mmBtu; HF: 0.0002 lb/mmBtu) are taken from Unit 4 stack testing performed on June 9, 2011.
- Emissions factors from AP-42 tables 1.3-9 and 1.3-11

## Distillate (No. 2) Fuel Oil HAPs Calculations for RY 2019

Facility Name: Fort Smallwood Complex

Facility ID: 24-003-00468

Equipment Description:

Registration No.:

No. 2 Fuel Oil Usage in Gallons:

Total Heat Input in MMBtu:

BS Aux Blr 1	BS Aux Blr 2	BS Unit 1	BS Unit 2
4-0507	4-0508	3-0015	3-0016
14,112	0	1,181,122	1,193,337
1933.34	0.00	161,814	163,487

Pollutant	AP-42 EF lb/TBtu	BS Aux Blr 1		BS Aux Blr 2		BS Unit 1		BS Unit 2		Fuel Total Tons
		Pounds	Tons	Pounds	Tons	Pounds	Tons	Pounds	Tons	
Arsenic (As)	4	7.73E-03	3.87E-06	0.00E+00	0.00E+00	6.47E-01	3.24E-04	6.54E-01	3.27E-04	6.55E-04
Beryllium (Be)	3	5.80E-03	2.90E-06	0.00E+00	0.00E+00	4.85E-01	2.43E-04	4.90E-01	2.45E-04	4.91E-04
Cadmium (Cd)	3	5.80E-03	2.90E-06	0.00E+00	0.00E+00	4.85E-01	2.43E-04	4.90E-01	2.45E-04	4.91E-04
Chromium (Cr)*	3	5.80E-03	2.90E-06	0.00E+00	0.00E+00	4.85E-01	2.43E-04	4.90E-01	2.45E-04	4.91E-04
Copper (Cu)	6	1.16E-02	5.80E-06	0.00E+00	0.00E+00	9.71E-01	4.86E-04	9.81E-01	4.91E-04	9.83E-04
Formaldehyde (HCOH)*	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead (Pb)	See lead calculation sheet for total lead emissions									
Manganese (Mn)	6	1.16E-02	5.80E-06	0.00E+00	0.00E+00	9.71E-01	4.86E-04	9.81E-01	4.91E-04	9.83E-04
Mercury (Hg)	3	5.80E-03	2.90E-06	0.00E+00	0.00E+00	See Hg calculation sheet for CEMs data				2.90E-06
Nickel (Ni)	3	5.80E-03	2.90E-06	0.00E+00	0.00E+00	4.85E-01	2.43E-04	4.90E-01	2.45E-04	4.91E-04
Selenium (Se)	15	2.90E-02	1.45E-05	0.00E+00	0.00E+00	2.43E+00	1.22E-03	2.45E+00	1.23E-03	2.46E-03
Zinc	4	7.73E-03	3.87E-06	0.00E+00	0.00E+00	6.47E-01	3.24E-04	6.54E-01	3.27E-04	6.55E-04

### NOTES:

1. Emission factors from AP-42 Table 1.3-10

## Distillate (No. 2) Fuel Oil HAPs Calculations for RY 2019

**Facility Name:** Fort Smallwood Complex  
**Facility ID:** 24-003-00468  
**Equipment Description:** HAW CT  
**Registration No.:** 4-0007  
**No. 2 Fuel Oil Usage in Gallons:** 16,342  
**Total Heat Input in MMBtu:** 2,239

Pollutant	AP-42 EF	Pounds	Tons
	lb/mmBtu		
Arsenic (As)	1.10E-05	2.46E-02	1.23E-05
Benzene	5.50E-05	1.23E-01	6.15E-05
Beryllium (Be)	3.10E-07	6.94E-04	3.47E-07
1,3-Butadiene	1.60E-05	3.58E-02	1.79E-05
Cadmium (Cd)	4.80E-06	1.07E-02	5.35E-06
Chromium (Cr)*	1.10E-05	2.46E-02	1.23E-05
Formaldehyde (HCOH)*	2.80E-04	6.27E-01	3.14E-04
Lead (Pb)	See Pb calc sheet for emissions		
Manganese (Mn)	7.90E-04	1.77E+00	8.85E-04
Mercury (Hg)	1.20E-06	2.69E-03	1.35E-06
Naphthalene	3.50E-05	7.84E-02	3.92E-05
Nickel (Ni)	4.60E-06	1.03E-02	5.15E-06
PAH	4.00E-05	8.96E-02	4.48E-05
Selenium (Se)	2.50E-05	5.60E-02	2.80E-05

**NOTES:**

1. Emission factors from AP-42 Table 3.1-4 (4/00) and 3.1-5 (4/00)

# Natural Gas Boiler HAPs Calculations for RY 2019

**Facility Name:** Fort Smallwood Complex  
**Facility ID:** 24-003-00468  
**Equipment Description:**  
**Registration No.:**  
**Natural Gas Usage in 10<sup>6</sup> SCF:**

HAW Unit 1	HAW Unit 2	HAW Unit 3	HAW Unit 4
5-0489	3-0017	3-0003	4-0017
274.58	46.71	44.81	27.17

Pollutant	AP-42 EF	Pounds	Tons	Pounds	Tons	Pounds	Tons	Pounds	Tons	Fuel Total Tons
	lb/10 <sup>6</sup> SCF									
2-Methylnaphthalene	2.40E-05	6.59E-03	3.30E-06	1.12E-03	5.60E-07	1.08E-03	5.40E-07	6.52E-04	3.26E-07	4.73E-06
3-Methylchloranthrene	1.80E-06	4.94E-04	2.47E-07	8.41E-05	4.21E-08	8.07E-05	4.04E-08	4.89E-05	2.45E-08	3.54E-07
7,12-Dimethylbenz(a)anthracene	1.60E-05	4.39E-03	2.20E-06	7.47E-04	3.74E-07	7.17E-04	3.59E-07	4.35E-04	2.18E-07	3.15E-06
Acenaphthene	1.80E-06	4.94E-04	2.47E-07	8.41E-05	4.21E-08	8.07E-05	4.04E-08	4.89E-05	2.45E-08	3.54E-07
Acenaphthylene	1.80E-06	4.94E-04	2.47E-07	8.41E-05	4.21E-08	8.07E-05	4.04E-08	4.89E-05	2.45E-08	3.54E-07
Anthracene	2.40E-06	6.59E-04	3.30E-07	1.12E-04	5.60E-08	1.08E-04	5.40E-08	6.52E-05	3.26E-08	4.73E-07
Arsenic	2.00E-04	5.49E-02	2.75E-05	9.34E-03	4.67E-06	8.96E-03	4.48E-06	5.43E-03	2.72E-06	3.94E-05
Barium	4.40E-03	1.21E+00	6.05E-04	2.06E-01	1.03E-04	1.97E-01	9.85E-05	1.20E-01	6.00E-05	8.67E-04
Benzene	2.10E-03	5.77E-01	2.89E-04	9.81E-02	4.91E-05	9.41E-02	4.71E-05	5.71E-02	2.86E-05	4.14E-04
Benzo(a)anthracene	1.80E-06	4.85E-07	2.43E-10	8.24E-08	4.12E-11	7.91E-08	3.96E-11	4.79E-08	2.40E-11	3.48E-10
Benzo(a)pyrene	1.20E-06	3.29E-04	1.65E-07	5.61E-05	2.81E-08	5.38E-05	2.69E-08	3.26E-05	1.63E-08	2.36E-07
Benzo(b)fluoranthene	1.80E-06	4.94E-04	2.47E-07	8.41E-05	4.21E-08	8.07E-05	4.04E-08	4.89E-05	2.45E-08	3.54E-07
Benzo(g,h,i)perylene	1.20E-06	3.29E-04	1.65E-07	5.61E-05	2.81E-08	5.38E-05	2.69E-08	3.26E-05	1.63E-08	2.36E-07
Benzo(k)fluoranthene	1.80E-06	4.94E-04	2.47E-07	8.41E-05	4.21E-08	8.07E-05	4.04E-08	4.89E-05	2.45E-08	3.54E-07
Beryllium	1.20E-05	3.29E-03	1.65E-06	5.61E-04	2.81E-07	5.38E-04	2.69E-07	3.26E-04	1.63E-07	2.36E-06
Butane	2.10E+00	5.77E+02	2.89E-01	9.81E+01	4.91E-02	9.41E+01	4.71E-02	5.71E+01	2.86E-02	4.14E-01
Cadmium	1.10E-03	3.02E-01	1.51E-04	5.14E-02	2.57E-05	4.93E-02	2.47E-05	2.99E-02	1.50E-05	2.16E-04
Chromium	1.40E-03	3.84E-01	1.92E-04	6.54E-02	3.27E-05	6.27E-02	3.14E-05	3.80E-02	1.90E-05	2.75E-04
Chrysene	1.80E-06	4.94E-04	2.47E-07	8.41E-05	4.21E-08	8.07E-05	4.04E-08	4.89E-05	2.45E-08	3.54E-07
Cobalt	8.40E-05	2.31E-02	1.16E-05	3.92E-03	1.96E-06	3.76E-03	1.88E-06	2.28E-03	1.14E-06	1.66E-05
Copper	8.50E-04	2.33E-01	1.17E-04	3.97E-02	1.99E-05	3.81E-02	1.91E-05	2.31E-02	1.16E-05	1.68E-04
Dibenzo(a,h)anthracene	1.20E-06	3.29E-04	1.65E-07	5.61E-05	2.81E-08	5.38E-05	2.69E-08	3.26E-05	1.63E-08	2.36E-07
Dichlorobenzene	1.20E-03	3.29E-01	1.65E-04	5.61E-02	2.81E-05	5.38E-02	2.69E-05	3.26E-02	1.63E-05	2.36E-04
Ethane	3.10E+00	8.51E+02	4.26E-01	1.45E+02	7.25E-02	1.39E+02	6.95E-02	8.42E+01	4.21E-02	6.10E-01
Fluoranthene	3.00E-06	8.24E-04	4.12E-07	1.40E-04	7.00E-08	1.34E-04	6.70E-08	8.15E-05	4.08E-08	5.90E-07
Formaldehyde	7.50E-02	2.06E+01	1.03E-02	3.50E+00	1.75E-03	3.36E+00	1.68E-03	2.04E+00	1.02E-03	1.48E-02
Hexane	1.80E+00	4.94E+02	2.47E-01	8.41E+01	4.21E-02	8.07E+01	4.04E-02	4.89E+01	2.45E-02	3.54E-01
Indeno(1,2,3-cd)pyrene	1.80E-06	4.94E-04	2.47E-07	8.41E-05	4.21E-08	8.07E-05	4.04E-08	4.89E-05	2.45E-08	3.54E-07
Manganese	3.80E-04	1.04E-01	5.20E-05	1.77E-02	8.85E-06	1.70E-02	8.50E-06	1.03E-02	5.15E-06	7.45E-05
Mercury	2.60E-04	7.14E-02	3.57E-05	See Hg Calculation Sheet for Hg		CEMs data		7.06E-03	3.53E-06	3.92E-05



Molybdenum	1.10E-03	3.02E-01	1.51E-04	5.14E-02	2.57E-05	4.93E-02	2.47E-05	2.99E-02	1.50E-05	2.16E-04
Naphthalene	6.10E-04	1.67E-01	8.35E-05	2.85E-02	1.43E-05	2.73E-02	1.37E-05	1.66E-02	8.30E-06	1.20E-04
Nickel	2.10E-03	5.77E-01	2.89E-04	9.81E-02	4.91E-05	9.41E-02	4.71E-05	5.71E-02	2.86E-05	4.14E-04
Pentane	2.60E+00	7.14E+02	3.57E-01	1.21E+02	6.05E-02	1.17E+02	5.85E-02	7.06E+01	3.53E-02	5.11E-01
Phenanthrene	1.70E-05	4.67E-03	2.34E-06	7.94E-04	3.97E-07	7.62E-04	3.81E-07	4.62E-04	2.31E-07	3.35E-06
Propane	1.60E+00	4.39E+02	2.20E-01	7.47E+01	3.74E-02	7.17E+01	3.59E-02	4.35E+01	2.18E-02	3.15E-01
Pyrene	5.00E-06	1.37E-03	6.85E-07	2.34E-04	1.17E-07	2.24E-04	1.12E-07	1.36E-04	6.80E-08	9.82E-07
Selenium	2.40E-05	6.59E-03	3.30E-06	1.12E-03	5.60E-07	1.08E-03	5.40E-07	6.52E-04	3.26E-07	4.73E-06
Toluene	3.40E-03	9.34E-01	4.67E-04	1.59E-01	7.95E-05	1.52E-01	7.60E-05	9.24E-02	4.62E-05	6.69E-04
Vanadium	2.30E-03	6.32E-01	3.16E-04	1.07E-01	5.35E-05	1.03E-01	5.15E-05	6.25E-02	3.13E-05	4.52E-04
Zinc	2.90E-02	7.96E+00	3.98E-03	1.35E+00	6.75E-04	1.30E+00	6.50E-04	7.88E-01	3.94E-04	5.70E-03
Fluorene	2.80E-06	7.69E-04	3.85E-07	1.31E-04	6.55E-08	1.25E-04	6.25E-08	7.61E-05	3.81E-08	5.51E-07

NOTES:

1. Emission factors from AP-42 table 1.4-3 and 1.4-4

## Brandon Shores Quench Pumps HAPs Calculations for RY 2019

Facility Name: Fort Smallwood Complex  
 Facility ID: 24-003-00468

Equipment Description:	BS Quench Pumps
Registration No.:	9-0988
Diesel Fuel Usage (gallons)	1,492.0
Total Heat Input in MMBtu:	207.388

Pollutant	AP-42 EF	Brandon Shores Quench Pumps	
	lb/mmBtu	Pounds	Tons
1,3-Butadiene	3.91E-05	8.11E-03	4.06E-06
Acetaldehyde	7.67E-04	1.59E-01	7.95E-05
Acrolein	9.25E-05	1.92E-02	9.60E-06
Benzene	9.33E-04	1.93E-01	9.65E-05
Formaldehyde	1.18E-03	2.45E-01	1.23E-04
Propylene	2.58E-03	5.35E-01	2.68E-04
Toluene	4.09E-04	8.48E-02	4.24E-05
Xylenes	2.85E-04	5.91E-02	2.96E-05

### Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	1.42E-06	2.94E-04	1.47E-07
Acenaphthylene	5.06E-06	1.05E-03	5.25E-07
Anthracene	1.87E-06	3.88E-04	1.94E-07
Benzo(a)anthracene	1.68E-06	3.48E-04	1.74E-07
Benzo(a)pyrene	1.88E-07	3.90E-05	1.95E-08
Benzo(b)fluoranthene	9.91E-08	2.06E-05	1.03E-08
Benzo(g,h,i)perylene	4.89E-07	1.01E-04	5.05E-08
Benzo(k)fluoranthene	1.55E-07	3.21E-05	1.61E-08
Chrysene	3.53E-07	7.32E-05	3.66E-08
Dibenzo(a,h)anthracene	5.83E-07	1.21E-04	6.05E-08
Fluoranthene	7.61E-06	1.58E-03	7.90E-07
Fluorene	2.92E-05	6.06E-03	3.03E-06
Indeno(1,2,3-cd)pyrene	3.75E-07	7.78E-05	3.89E-08
Naphthalene	8.48E-05	1.76E-02	8.80E-06
Phenanthrene	2.94E-05	6.10E-03	3.05E-06
Pyrene	4.78E-06	9.91E-04	4.96E-07

### NOTES:

1. Emissions factors from AP-42 Table 3.3.2

**VOC Calculations for RY 2019**  
**Facility: Fort Smallwood Complex**

Plant	Equipment Description	MDE Registration No.	Fuel S: Startup P: Primary	Annual Fuel Usage	Ozone Season Usage	Units	Annual Hours	Ozone Season Hours	BHP	Fuel Heat Content mmBtu/Unit	Emission Factor	Emission Factor Units	Annual Emissions (tons)	Ozone Season (tons)	Reference or Method	
BS	Aux Boiler No. 11	4-0507	P No. 2 Oil	14,112	0	Gallons				0.137	0.2	lb/1,000 gal	1.4E-03	0.0E+00	AP 42 Table 1.3-3 (5/10)	
	Aux Boiler No. 12	4-0508	P No. 2 Oil	0	0	Gallons				0.137	0.2	lb/1,000 gal	0.00	0.00	AP 42 Table 1.3-3 (5/10)	
	Unit 1	3-0015	S No. 2 Oil	1,181,122	804,688	Gallons					0.137	0.2	lb/1,000 gal	0.12	0.080	AP 42 Table 1.3-3 (5/10)
			P Coal	362,965	269,386	Tons					26.11	0.06	lb/ton	10.9	8.1	AP 42 Table 1.1-19 (9/98)
	Unit 2	3-0016	S No. 2 Oil	1,193,337	551,612	Gallons					0.137	0.2	lb/1,000 gal	0.12	0.055	AP 42 Table 1.3-3 (5/10)
			P Coal	692,976	352,459	Tons					26.11	0.06	lb/ton	20.8	10.6	AP 42 Table 1.1-19 (9/98)
Quench Pumps	9-0988	P ULS Diesel	1,492	681	Gallons	61.1	27.9	485		0.139	2.47E-03	lb/hp-hr	0.037	0.017	AP 42 Table 3.3-1 (10/96)	
HAW	Unit 1	5-0489	P No. 6 Oil	321,181	0	Gallons				0.148	0.76	lb/1,000 gal	0.12	0.000	AP 42 Table 1.3-3 (5/10)	
			P Natural Gas	274,580	32,824	McF					1.056	5.5	lb/10 <sup>6</sup> scf	0.76	0.090	AP 42 Table 1.4-2 (7/98)
	Unit 2	3-0017	S Natural Gas	46,710	16,966	McF					1.056	5.5	lb/10 <sup>6</sup> scf	0.13	0.047	AP 42 Table 1.4-2 (7/98)
			P Coal	9,418	1,775	Tons					22.03	0.06	lb/ton	0.28	0.053	AP 42 Table 1.1-19 (9/98)
	Unit 3	3-0003	S Natural Gas	44,810	17,495	McF					1.056	5.5	lb/10 <sup>6</sup> scf	0.12	0.048	AP 42 Table 1.4-2 (7/98)
			P Coal	68,832	20,524	Tons					24.31	0.06	lb/ton	2.1	0.6	AP 42 Table 1.1-19 (9/98)
	Unit 4	4-0017	S Natural Gas	27,170	16,360	McF					1.056	5.5	lb/10 <sup>6</sup> scf	0.075	0.045	AP 42 Table 1.4-2 (7/98)
			P No.6 Oil	839,001	375,948	Gallons					0.149	0.76	lb/1,000 gal	0.3	0.143	AP 42 Table 1.3-3 (5/10)
CT	4-0007	P No. 2 Oil	16,342	4,302	Gallons					0.136	4.1E-04	lb/mmBtu	4.56E-04	1.20E-04	AP 42 Table 3.1-2a (4/00)	

NOTES:

1. Mcf — equals the volume of 1,000 cubic feet (cf) of natural gas.

**CO Calculations for RY 2019**  
**Facility: Fort Smallwood Complex**

Plant	Equipment Description	MDE Registration No.	Fuel S: Startup P: Primary	Annual Fuel Usage	Units	Annual Hours	BHP	Fuel Heat Content mmBtu/Unit	Emission Factor	Emission Factor Units	Emissions (tons)	Reference or Method
BS	Aux Boiler No. 11	4-0507	P No. 2 Oil	14,112	Gallons				5	lb/1,000 gal	3.53E-02	AP 42 Table 1.3-1 (5/10)
	Aux Boiler No. 12	4-0508	P No. 2 Oil	0	Gallons				5	lb/1,000 gal	0.0	AP 42 Table 1.3-1 (5/10)
	Unit 1	3-0015	S No. 2 Oil	1,181,122	Gallons				5	lb/1,000 gal	3.0	AP 42 Table 1.3-1 (5/10)
			P Coal	362,965	Tons				0.5	lb/ton	90.7	AP 42 Table 1.1-3 (9/98)
	Unit 2	3-0016	S No.2 oil	1,193,337	Gallons				5	lb/1,000 gal	3.0	AP 42 Table 1.3-1 (5/10)
			P Coal	692,976	Tons				0.5	lb/ton	173.2	AP 42 Table 1.1-3 (9/98)
Quench Pumps	9-0988	P ULS Diesel	1,492	Gallons	61.1	485		7.28E-04	lb/hp-hr	1.08E-02	Engine Manuf. Specs.	
HAW	Unit 1	5-0489	P No.6 Oil	321,181	Gallons				5	lb/1,000 gal	0.8	AP 42 Table 1.3-1 (5/10)
			P Natural Gas	274,580	McF				84	lb/10 <sup>3</sup> scf	11.53	AP 42 Table 1.4-1 (7/98)
	Unit 2	3-0017	S Natural Gas	46,710	McF				84	lb/10 <sup>3</sup> scf	1.96	AP 42 Table 1.4-1 (7/98)
			P Coal	9,418	Tons				0.5	lb/ton	2.35	AP 42 Table 1.1-3 (9/98)
	Unit 3	3-0003	S Natural Gas	44,810	McF				84	lb/10 <sup>3</sup> scf	1.9	AP 42 Table 1.4-1 (7/98)
			P Coal	68,832	Tons				0.5	lb/ton	17.2	AP 42 Table 1.1-3 (9/98)
	Unit 4	4-0017	S Natural Gas	27,170	McF				84	lb/10 <sup>3</sup> scf	1.14	AP 42 Table 1.4-1 (7/98)
			P No.6 Oil	839,001	Gallons				5	lb/1,000 gal	2.1	AP 42 Table 1.3-1 (5/10)
CT	4-0007	P No. 2 Oil	16,342	Gallons			0.136	3.3E-03	lb/mmBtu	3.67E-03	AP 42 Table 3.1-1 (4/00)	

NOTES:

1. **McF** — equals the volume of 1,000 cubic feet (cf) of natural gas.



**CO2 Calculations for RY 2019**  
**Facility: Fort Smallwood Complex**

Plant	Equipment Description	MDE Registration No.	Fuel S: Startup P: Primary	Annual Fuel Usage	Units	Annual Hours	BHP	Fuel Heat Content mmBtu/Unit	Emission Factor	Emission Factor Units	Emissions (tons)	Reference or Method
BS	Aux Boiler No. 11	4-0507	P No. 2 Oil	14,112	Gallons			0.137	157	lb/mmBtu	159	e-GGRT Subpart C
	Aux Boiler No. 12	4-0508	P No. 2 Oil	0	Gallons			0.137	157	lb/mmBtu	0.00	e-GGRT Subpart C
	Unit 1	3-0015	P Coal								1,000,841	e-GGRT Subpart D
	Unit 2	3-0016	P Coal								1,821,489	e-GGRT Subpart D
	Quench Pumps	9-0988	P ULS Diesel	1,492	Gallons	61.1	485		1.15	lb/hp-hr	17.04	AP 42 Table 3.3-1 (10/96)
HAW	Unit 1	5-0489	P Gas / RFO								23,383	e-GGRT Subpart D
	Unit 2	3-0017	P Coal								24,457	e-GGRT Subpart D
	Unit 3	3-0003	P Coal								164,813	e-GGRT Subpart D
	Unit 4	4-0017	P No.6 Oil								12,241	e-GGRT Subpart D
	CT	4-0007	P No. 2 Oil								184	e-GGRT Subpart C

NOTES:

1. Mcf — equals the volume of 1,000 cubic feet (cf) of natural gas.

**CH4 Calculations for RY 2019**  
**Facility: Fort Smallwood Complex**

Plant	Equipment Description	MDE Registration No.	Fuel S: Startup P: Primary	Annual Fuel Usage	Units	Fuel Heat Content mmBtu/Unit	Emission Factor	Emission Factor Units	Emissions (tons)	Reference or Method
BS	Aux Boiler No. 11	4-0507	P No. 2 Oil						6.44E-03	e-GGRT Subpart C
	Aux Boiler No. 12	4-0508	P No. 2 Oil						0.00	e-GGRT Subpart C
	Unit 1	3-0015	S No. 2 Oil						0.540	e-GGRT Subpart D
			P Coal					114.916	e-GGRT Subpart D	
	Unit 2	3-0016	S No. 2 Oil						0.540	e-GGRT Subpart D
			P Coal					219.393	e-GGRT Subpart D	
Quench Pumps	9-0988	P ULS Diesel	1,492			0.216	lb/1,000 gal	1.61E-04	AP 42 Table 1.3-3 (5/10)	
HAW	Unit 1	5-0489	P No. 6 Oil						0.127	e-GGRT Subpart D
			P Natural Gas						0.320	e-GGRT Subpart D
	Unit 2	3-0017	S Natural Gas						0.055	e-GGRT Subpart D
			P Coal					2.513	e-GGRT Subpart D	
	Unit 3	3-0003	S Natural Gas						0.055	e-GGRT Subpart D
			P Coal					20.294	e-GGRT Subpart D	
	Unit 4	4-0017	S Natural Gas						0.419	e-GGRT Subpart D
			P No.6 Oil						0.033	e-GGRT Subpart D
CT	4-0007	P No. 2 Oil						0.008	e-GGRT Subpart C	

NOTES:

1. Mcf — equals the volume of 1,000 cubic feet (cf) of natural gas.

**N2O Calculations for RY 2019**  
**Facility: Fort Smallwood Complex**

Plant	Equipment Description	MDE Registration No.	Fuel S: Startup P: Primary	Annual Fuel Usage	Units	Fuel Heat Content mmBtu/Unit	Emission Factor	Emission Factor Units	Emissions (tons)	Reference or Method
BS	Aux Boiler No. 11	4-0507	P No. 2 Oil						1.10E-03	e-GGRT Subpart C
	Aux Boiler No. 12	4-0508	P No. 2 Oil						0.00	e-GGRT Subpart C
	Unit 1	3-0015	S No. 2 Oil						0.107	e-GGRT Subpart D
			P Coal						16.711	e-GGRT Subpart D
	Unit 2	3-0016	S No.2 oil						0.108	e-GGRT Subpart D
			P Coal						31.912	e-GGRT Subpart D
Quench Pumps	9-0988	P ULS Diesel	Pollutant not Produced							
HAW	Unit 1	5-0489	P No. 6 Oil						0.032	e-GGRT Subpart D
			P Natural Gas						0.032	e-GGRT Subpart D
	Unit 2	3-0017	S Natural Gas						0.006	e-GGRT Subpart D
			P Coal						0.366	e-GGRT Subpart D
	Unit 3	3-0003	S Natural Gas						0.006	e-GGRT Subpart D
			P Coal						2.951	e-GGRT Subpart D
	Unit 4	4-0017	S Natural Gas						0.003	e-GGRT Subpart D
			P No.6 Oil						0.083	e-GGRT Subpart D
CT	4-0007	P No. 2 Oil						1.10E-03	e-GGRT Subpart C	

NOTES:

1. **Mcf** — equals the volume of 1,000 cubic feet (cf) of natural gas.
2. All e-GGRT emissions are metric tons from the Annual Greenhouse Gas report converted to short tons (metric tons multiplied by 1.10231)

**Hg Calculations for RY 2019**  
**Facility: Fort Smallwood Complex**

Plant	Equipment Description	MDE Registration No.	Emissions (tons)	Reference or Method
BS	Unit 1	3-0015	2.25E-03	CEM System
	Unit 2	3-0016	3.65E-03	CEM System
HAW	Unit 2	3-0017	1.59E-06	CEM System
	Unit 3	3-0003	1.45E-04	CEM System



**PM - Filterable Calculations for RY 2019**  
**Facility: Fort Smallwood Complex**

Plant	Equipment Description	MDE Registration No.	Fuel S: Startup P: Primary	Annual Fuel Usage	Units	Annual Hours	BHP	Fuel Heat Content mmBtu/Unit	Emission Factor	Emission Factor Units	Emissions (tons)	Reference or Method	
BS	Aux Boiler No. 11	4-0507	P No. 2 Oil	14,112	Gallons				2	lb/1,000 gal	1.41E-02	AP 42 Table 1.3-1 (5/10)	
	Aux Boiler No. 12	4-0508	P No. 2 Oil	0	Gallons				2	lb/1,000 gal	0.00E+00	AP 42 Table 1.3-1 (5/10)	
	Unit 1	3-0015	S No. 2 Oil									7.12	CEMs Data
			P Coal										
	Unit 2	3-0016	S No. 2 Oil									0.10	CEMs Data
P Coal													
Quench Pumps	9-0988	P ULS Diesel				61.1	485		1.80E-04	lb/hp-hr	2.67E-03	Engine Manuf. Specs.	
HAW	Unit 1	5-0489	P No. 6 Oil	321,181	Gallons			0.148	0.018	lb/mmBtu	0.428	2019 Stack Test	
			P Natural Gas	274,580	Mcf				1.9	lb/10 <sup>6</sup> scf	0.261	AP 42 Table 1.4-2 (7/98)	
	Unit 2	3-0017	S Natural Gas	46,710	Mcf				1.9	lb/10 <sup>6</sup> scf	0.044	AP 42 Table 1.4-2 (7/98)	
			P Coal	9,418	Tons			22.03	0.030	lb/mmBtu	3.11	2019 Stack Test	
	Unit 3	3-0003	S Natural Gas	44,810	Mcf				1.9	lb/10 <sup>6</sup> scf	0.043	AP 42 Table 1.4-2 (7/98)	
			P Coal	68,832	Tons			24.31	0.010	lb/mmBtu	8.37	2019 Stack Test	
	Unit 4	4-0017	S Natural Gas	27,170	Mcf				1.9	lb/10 <sup>6</sup> scf	0.026	AP 42 Table 1.4-2 (7/98)	
P No.6 Oil			839,001	Gallons				0.149	0.021	lb/mmBtu	1.31	2018 Stack Test	
CT	4-0007	P No. 2 Oil	16,342	Gallons				0.136	4.3E-03	lb/mmBtu	0.005	AP 42 Table 3.1-2a (4/00)	

**NOTES:**

1. Mcf — equals the volume of 1,000 cubic feet (cf) of natural gas.
2. Quench Pump PM emission factor is from emission data for the 2,100 rpm JX6H-UF40 2100 engine (0.08 grams / hp-hr).
3. Brandon Shores Unit 1 State PM CEMs 5-Year RCA was performed on September 20, 2017. The adjusted PM CEMS correlation equation was changed to reflect the stack test results of  $y=3.494x+0.398$ .
4. Brandon Shores Unit 2 State PM CEMs 5-Year RCA was performed on September 27, 2017. The adjusted PM CEMs correlation equation was changed to reflect the stack test results of  $y=3.626x-1.548$ .

**PM10 Calculations for RY 2019**  
**Facility: Fort Smallwood Complex**

Plant	Equipment Description	MDE Registration No.	Fuel S: Startup P: Primary	Annual Fuel Usage	Units	Annual Hours	BHP	AP-42 Emission Conversion Factor	Fuel Heat Content mmBtu/Unit	Emission Factor	Emission Factor Units	Emissions (tons)	Reference or Method
BS	Aux Boiler No. 11	4-0507	P No. 2 Oil	14,112	Gallons					1.0	lb/1,000 gal	7.06E-03	AP 42 Table 1.3-6 (5/10)
	Aux Boiler No. 12	4-0508	P No. 2 Oil	0	Gallons					1.0	lb/1,000 gal	0.000	AP 42 Table 1.3-6 (5/10)
	Unit 1	3-0015	S No. 2 Oil	1,181,122	Gallons					92%	See note 2	6.6	CEMs Data
			P Coal	362,965	Tons								
	Unit 2	3-0016	S No. 2 oil	1,193,337	Gallons					92%	See note 2	0.092	CEMs Data
P Coal			692,976	Tons									
Quench Pumps	9-0988	P ULS Diesel	1,492	Gallons	61.1	485			1.80E-04	lb/hp-hr	2.67E-03	Engine Manuf. Specs.	
HAW	Unit 1	5-0489	P No. 6 Oil	321,181	Gallons					3.91E-02	lb/1,000 gal	6.28E-03	AP 42 Table 1.3-4 (5/10)
			P Natural Gas	274,580	McF					1.9	lb/10 <sup>6</sup> scf	0.3	AP 42 Table 1.4-2 (7/98)
	Unit 2	3-0017	S Natural Gas	46,710	McF					1.9	lb/10 <sup>6</sup> scf	0.04	AP 42 Table 1.4-2 (7/98)
			P Coal	9,418	Tons					67%	See note 3	2.1	AP 42 Table 1.1-6 (9/98)
	Unit 3	3-0003	S Natural Gas	44,810	McF					1.9	lb/10 <sup>6</sup> scf	0.04	AP 42 Table 1.4-2 (7/98)
			P Coal	68,832	Tons					67%	See note 3	5.6	AP 42 Table 1.1-6 (9/98)
	Unit 4	4-0017	S Natural Gas	27,170	McF					1.9	lb/10 <sup>6</sup> scf	0.026	AP 42 Table 1.4-2 (7/98)
			P No.6 Oil	839,001	Gallons					95%	See note 4	1.2	AP 42 Table 1.3-4 (5/10)
CT	4-0007	P No. 2 Oil	16,342	Gallons					0.136	4.30E-03	lb/mmBtu	4.78E-03	AP 42 Table 3.1-2a (4/00)

**NOTES:**

1. **Mcf** — equals the volume of 1,000 cubic feet (cf) of natural gas.
2. PM<sub>10</sub> emission rates for coal are calculated using the cumulative mass percentage of filterable PM of 92% for dry bottom boilers with baghouse controls given in AP-42, Table 1.1-6 (9/98).
3. PM<sub>10</sub> emission rates for coal are calculated using the cumulative mass percentage of filterable PM of 67% for dry bottom boilers with electrostatic precipitator controls given in AP-42, Table 1.1-6 (9/98).
4. PM<sub>10</sub> emission rates for No. 6 oil are calculated using the cumulative mass percentage of filterable PM of 95% for multiple cyclone controlled industrial boilers firing residual oil given in AP-42, Table 1.3-5 (5/10)



**PM2.5 Calculations for RY 2019**  
**Facility: Fort Smallwood Complex**

Plant	Equipment Description	MDE Registration No.	Fuel S: Startup P: Primary	Annual Fuel Usage	Units	Annual Hours	BHP	AP-42 Emission Conversion Factor	Fuel Heat Content mmBtu/Unit	Emission Factor	Emission Factor Units	Emissions (tons)	Reference or Method	
BS	Aux Boiler No. 11	4-0507	P No. 2 Oil	14,112	Gallons					0.25	lb/1,000 gal	1.76E-03	AP 42 Table 1.3-6 (5/10)	
	Aux Boiler No. 12	4-0508	P No. 2 Oil	0	Gallons					0.25	lb/1,000 gal	0.00E+00	AP 42 Table 1.3-6 (5/10)	
	Unit 1	3-0015	S No. 2 Oil	1,181,122	Gallons						53%	See note 2	3.77	AP 42 Table 1.3-6 (5/10)
			P P-Coal	362,965	Tons					AP 42 Table 1.1-6 (9/98)				
	Unit 2	3-0016	S No. 2 Oil	1,193,337	Gallons						53%	See note 2	0.053	AP 42 Table 1.3-6 (5/10)
			P Coal	692,976	Tons					AP 42 Table 1.1-6 (9/98)				
Quench Pumps	9-0988	P ULS Diesel	1,492	Gallons	61.1	485			1.8E-04	lb/hp-hr	2.67E-03	Engine Manuf. Specs.		
HAW	Unit 1	5-0489	P No. 6. Oil	321,181	Gallons					2.60E-02	lb/1,000 gal	4.18E-03	AP 42 Table 1.3-4 (5/10)	
			P Natural Gas	274,580	McF					1.9	lb/10 <sup>6</sup> scf	0.26	AP 42 Table 1.4-2 (7/98)	
	Unit 2	3-0017	S Natural Gas	46,710	McF					1.9	lb/10 <sup>6</sup> scf	0.04	AP 42 Table 1.4-2 (7/98)	
			P Coal	9,418	Tons					29%	See note 3	0.90	AP 42 Table 1.1-6 (9/98)	
	Unit 3	3-0003	S Natural Gas	44,810	McF					1.9	lb/10 <sup>6</sup> scf	0.04	AP 42 Table 1.4-2 (7/98)	
			P Coal	68,832	Tons					29%	See note 3	2.4	AP 42 Table 1.1-6 (9/98)	
	Unit 4	4-0017	S Natural Gas	27,170	McF					1.9	lb/10 <sup>6</sup> scf	0.026	AP 42 Table 1.4-2 (7/98)	
			P No.6 Oil	839,001	Gallons					22%	See note 4	0.288	AP 42 Table 1.3-5 (5/10)	
	CT	4-0007	P No. 2 Oil	16,342	Gallons					0.136	4.30E-03	lb/mmBtu	0.005	AP 42 Table 3.1-2a (4/00)

- NOTES:
1. **Mcf** — equals the volume of 1,000 cubic feet (cf) of natural gas.
  2. PM<sub>2.5</sub> emission rates for coal are calculated using the cumulative mass percentage of filterable PM of 53% for dry bottom boilers with baghouse controls given in AP-42, Table 1.1-6 (9/98).
  3. PM<sub>2.5</sub> emission rates for coal are calculated using the cumulative mass percentage of filterable PM of 29% for dry bottom boilers with electrostatic precipitator controls given in AP-42, Table 1.1-6 (9/98).
  4. PM<sub>2.5</sub> emission rates for Unit 4 on No. 6 oil are calculated using the cumulative mass percentage of filterable PM of 22% for multiple cyclone controlled industrial boilers firing residual oil given in AP-42, Table 1.3-5 (5/10)
  5. PM<sub>2.5</sub> Quench Pump emission factor is from emission data for the 2,100 rpm JX6H-UF40 engine (0.08 grams / hp-hr). Per AP-42 Table 3.3-1 EMISSION FACTORS FOR UNCONTROLLED GASOLINE AND DIESEL INDUSTRIAL ENGINES, all particulate is assumed to be ≤ 1 µm in size.

**PM - Condensable Calculations for RY 2019**  
**Facility: Fort Smallwood Complex**

Plant	Equipment Description	MDE Registration No.	Fuel S: Startup P: Primary	Annual Fuel Usage	Units	Fuel Heat Content mmBtu/Unit	Emission Factor	Emission Factor Units	Emissions (tons)	Reference or Method
BS	Aux Boiler No. 11	4-0507	P No. 2 Oil	14,112	Gallons		1.3	lb/1,000 gal	9.17E-03	AP 42 Table 1.3-2 (5/10)
	Aux Boiler No.12	4-0508	P No. 2 Oil	0	Gallons		1.3	lb/1,000 gal	0.00	AP 42 Table 1.3-2 (5/10)
	Unit 1	3-0015	S No. 2 Oil	1,181,122	Gallons		1.3	lb/1,000 gal	0.77	AP 42 Table 1.3-2 (5/10)
			P Coal	362,965	Tons	26.11	0.002	lb/mmBtu	9.5	2019 Stack Test
	Unit 2	3-0016	S No. 2 Oil	1,193,337	Gallons		1.3	lb/1,000 gal	0.78	AP 42 Table 1.3-2 (5/10)
			P Coal	692,976	Tons	26.11	0.004	lb/mmBtu	36	2019 Stack Test
Quench Pumps	9-0988	P ULS Diesel	Pollutant Not Produced							
HAW	Unit 1	5-0489	P No.6 Oil	321,181	Gallons	0.148	0.004	lb/mmBtu	0.095	2019 Stack Test
			P Natural Gas	274,580	McF		5.7	lb/10 <sup>6</sup> scf	0.783	AP 42 Table 1.4-2 (7/98)
	Unit 2	3-0017	S Natural Gas	46,710	McF		5.7	lb/10 <sup>6</sup> scf	0.133	AP 42 Table 1.4-2 (7/98)
			P Coal	9,418	Tons	22.03	0.029	lb/mmBtu	3.01	2014 Stack Test
	Unit 3	3-0003	S Natural Gas	44,810	McF		5.7	lb/10 <sup>6</sup> scf	0.128	AP 42 Table 1.4-2 (7/98)
			P Coal	68,832	Tons	24.31	0.029	lb/mmBtu	24.3	2015 Stack Test
	Unit 4	4-0017	S Natural Gas	27,170	McF		5.7	lb/10 <sup>6</sup> scf	0.077	AP 42 Table 1.4-2 (7/98)
			P No.6 Oil	839,001	Gallons	0.149	0.005	lb/mmBtu	0.018	2018 Stack Test
CT	4-0007	P No. 2 Oil	16,342	Gallons	0.136	7.2E-03	lb/mmBtu	8.00E-03	AP 42 Table 3.1-2a (4/00)	

NOTES:

1. **Mcf** — equals the volume of 1,000 cubic feet (cf) of natural gas.

**Pb Calculations for RY 2019**  
**Facility: Fort Smallwood Complex**

Plant	Equipment Description	MDE Registration No.	Fuel S: Startup P: Primary	Annual Fuel Usage	Units	Fuel Heat Content mmBtu/Unit	Emission Factor	Emission Factor Units	Emissions (tons)	Reference or Method
BS	Aux Boiler No. 11	4-0507	P No. 2 Oil	14,112	Gallons	0.137	9	lb/TBtu	8.70E-06	AP 42 Table 1.3-10 (05/10)
	Aux Boiler No. 12	4-0508	P No. 2 Oil	0	Gallons	0.137	9	lb/TBtu	0.00E+00	AP 42 Table 1.3-10 (05/10)
	Unit 1	3-0015	S No. 2 Oil	1,181,122	Gallons	0.137	9	lb/TBtu	7.28E-04	AP 42 Table 1.3-10 (05/10)
			P Coal	362,965	Tons	26.11	5.99E-07	lb/mmBtu	0.003	2019 Stack Test
	Unit 2	3-0016	S No. 2 oil	1,193,337	Gallons	0.137	9	lb/TBtu	7.36E-04	AP 42 Table 1.3-10 (05/10)
			P Coal	692,976	Tons	26.11	2.82E-07	lb/mmBtu	0.003	2019 Stack Test
Quench Pumps	9-0988	P ULS Diesel	Pollutant Not Produced							
HAW	Unit 1	5-0489	P No. 6 Oil	321,181	Gallons	0.148	1.51E-03	lb/1,000 gal	2.42E-04	AP 42 Table 1.3-11(5/10)
			P Natural Gas	274,580	McF	1.056	5.0E-04	lb/10° scf	6.86E-05	AP 42 Table 1.4-2 (7/98)
	Unit 2	3-0017	S Natural Gas	46,710	McF	1.056	5.0E-04	lb/10° scf	1.17E-05	AP 42 Table 1.4-2 (7/98)
			P Coal	9,418	Tons	22.03	7.32E-07	lb/mmBtu	0.000	EPA EF for MATS
	Unit 3	3-0003	S Natural Gas	44,810	McF	1.056	5.0E-04	lb/10° scf	1.12E-05	AP 42 Table 1.4-2 (7/98)
			P Coal	68,832	Tons	24.31	7.32E-07	lb/mmBtu	0.001	EPA EF for MATS
	Unit 4	4-0017	S Natural Gas	27,170	McF	1.056	5.0E-04	lb/10° scf	6.79E-06	AP 42 Table 1.4-2 (7/98)
			P No. 6 Oil	839,001	Gallons	0.149	1.51E-03	lb/1,000 gal	6.33E-04	AP 42 Table 1.3-11(5/10)
CT	4-0007	P No. 2 Oil	16,342	Gallons	0.136	1.4E-05	lb/mmBtu	1.56E-05	AP 42 Table 3.1-2a (04/00)	

NOTES:

1. **Mcf** — equals the volume of 1,000 cubic feet (cf) of natural gas.

**SO2 Calculations for RY 2019**  
**Facility: Fort Smallwood Complex**

Plant	Equipment Description	MDE Registration No.	Fuel Startup / Primary	Annual Fuel Usage	Units	Fuel Heat Content mmBtu/Unit	Emission Factor	% Sulfur	Emission Factor Units	Emissions (tons)	Reference or Method
BS	Aux Boiler No. 11	4-0507	No. 2 Oil	14,112	Gallons		142	0.022	lb/1,000 gal	2.20E-02	AP-42 Table 1.3-1 (5/10)
	Aux Boiler No. 12	4-0508	No. 2 Oil	0	Gallons		142	0.022	lb/1,000 gal	0.00E+00	AP-42 Table 1.3-1 (5/10)
	Unit 1	3-0015	No. 2 Oil/Coal							546.2	2019 ECMPs Report (CEMs)
	Unit 2	3-0016	No. 2 Oil/Coal							953.1	2019 ECMPs Report (CEMs)
	Quench Pumps	9-0988	ULS Diesel	1,492	Gallons	0.137	0.29	0.022	lb/mmBtu	6.52E-04	AP-42 Table 3.3-1 (10/96)
HAW	Unit 1	5-0489	Gas/No. 6 Oil							15.3	2019 ECMPs Report (CEMs)
	Unit 2	3-0017	Gas/Coal							88.8	2019 ECMPs Report (CEMs)
	Unit 3	3-0003	Gas/Coal							1121.6	2019 ECMPs Report (CEMs)
	Unit 4	4-0017	Gas/No. 6 Oil							39.9	2019 ECMPs Report (CEMs)
	CT	4-0007	No. 2 Oil	16,342	Gallons	0.137	1.01	0.038	lb/mmBtu	0.04	AP-42 Table 3.1-2a (4/00)



## NOx Calculations for RY 2019

### Facility: Fort Smallwood Complex

Plant	Equipment Description	MDE Reg. No.	Fuel Type Startup / Primary	Annual Fuel Usage	Ozone Season Fuel Usage	Units	Annual Hours	Ozone Season Hours	HP	Fuel Heat Content mmBtu/Units	NOx Emission Factor	Emission Factor Units	Annual Emissions (tons)	Ozone Season (tons)	Reference or Method
BS	Aux Boiler #11	4-0507	No. 2 Oil	14,112	0	Gallons					20	lb/1,000 gal	1.41E-01	0.00E+00	AP 42 Table 1.3-1 (5/10)
	Aux Boiler #12	4-0508	No. 2 Oil	0	0	Gallons					20	lb/1,000 gal	0.00	0.00	AP 42 Table 1.3-1 (5/10)
	Unit 1	3-0015	No. 2 Oil/Coal										341.1	234.7	2019 ECMPS Report (CEMs)
	Unit 2	3-0016	No. 2 Oil/Coal										658.2	298.6	2019 ECMPS Report (CEMs)
	Quench Pumps	9-0988	ULS Diesel	1,492	681	Gallons	61.1	27.9	485		0.01	lb/hp-hr	1.48E-01	6.77E-02	Engine Manuf. Specs.
HAW	Unit 1	5-0489	Gas/No. 6 Oil										17.3	4.6	2019 ECMPS Report (CEMs)
	Unit 2	3-0017	Gas/Coal										30.5	7.3	2019 ECMPS Report (CEMs)
	Unit 3	3-0003	Gas/Coal										63.9	17.1	2019 ECMPS Report (CEMs)
	Unit 4	4-0017	Gas/No. 6 Oil										18.2	7.6	2019 ECMPS Report (CEMs)
	CT	4-0007	No. 2 Oil	16,342	4,302	Gallons				0.136	0.88	lb/mmBtu	1.0	0.3	AP 42 Table 3.1-1 (4/00)

## Material Handling PM Calculations for RY 2019

### Facility: Fort Smallwood Road Complex (H.A. Wagner)

Material Handling Equipment Description	Stack or Fugitive	Annual Emissions (tons)			Reference or Method
		PM	PM <sub>10</sub>	PM <sub>2.5</sub>	
Coal Transfer Points	F	0.076	0.036	0.005	AP 42 Section 13.2.4
Coal Pile Wind Erosion	F	1.812	0.906		AP 42 Section 13.2.4
Coal Pile Dozer	F	0.115	0.086	0.003	AP 42 Table 11.9.1
Bradford Breaker	F	0.063	0.028		AP 42 Table 11.19.2-2
Chem Mod Silo Bin Vent Filters	S	0.000	0.000	0.000	See Note 1
Fly Ash / Chem Mod Trucks on Paved Roads	F	0.577	0.115	0.028	AP 42 13.2.1

#### NOTES:

1. Material Handling PM calculations are located in workbook HAW\_MH\_PM Calculations\_RY2019. Source values are added to fugitive values on Form 3 for input into TEMPO.
2. Source: AP-42 Table 13.2.2-4 - EMISSION FACTOR FOR 1980'S VEHICLE FLEET EXHAUST, BRAKE WEAR AND TIRE WEAR and includes all trucks associated with gypsum and CCB transport.



## Material Handling PM Calculations for RY 2019

### Facility: Fort Smallwood Road Complex (Brandon Shores)

Material Handling Equipment Description	Stack or Fugitive	Annual Emissions (tons)			Reference or Method
		PM	PM <sub>10</sub>	PM <sub>2.5</sub>	
Coal Transfer Points	F	2.667	1.261	0.191	AP 42 Section 13.2.4
Coal Pile and Barge Wind Erosion	F	0.189	0.094	0.014	AP 42 Section 13.2.4
Coal Pile Bulldozer	F	1.850	0.403	0.040	AP 42 11.9.1
Chem Mod Silo Bin Vent Filters	S				See Note 3
Fly Ash / Chem Mod Trucks on Paved Roads	F	2.581	0.503	0.075	AP 42 13.2.1
Limestone Transfer Points	F	0.447	0.211	0.032	AP 42 Section 13.2.4
Limestone Piles Wind Erosion	F	0.103	0.051	0.008	EPA-450/2-92-004
Limestone Front End Loader	F	0.100	0.020	0.002	AP 42 13.2.2
Gypsum Transfer Points	F	0.070	0.033	0.005	AP 42 Section 13.2.4
Gypsum Pile Wind Erosion	F	0.103	0.051	0.008	EPA-450/2-92-004
Gypsum Trucks on Paved Roads	F				See Note 4
Gypsum Front End Loader	F	0.190	0.039	0.004	AP 42 13.2.2
FGD Silo Bin Vent Filters	S	3.154	3.154	0.478	See Note 1

#### NOTES:

1. Material Handling PM calculations are located in workbook BS\_MH\_PM Calculations\_RY2019. Source values are added to fugitive values on Form 3 for input into TEMPO.
2. Source: AP-42 Table 13.2.2-4 - EMISSION FACTOR FOR 1980'S VEHICLE FLEET EXHAUST, BRAKE WEAR AND TIRE WEAR and includes all trucks associated with gypsum and CCB transport.

## **APPENDIX I. ANNUAL COMPLIANCE CERTIFICATION (2019)**

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March 27, 2020

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

Re: Raven Power Fort Smallwood LLC, Brandon Shores and H.A. Wagner  
Generating Stations Compliance Certification for Part 70 Operating  
Permit No. 24-003-00468

Dear Compliance Officer:

Enclosed please find the 2019 Compliance Certification for the Brandon Shores and H. A. Wagner generating facilities operated by Raven Power Fort Smallwood LLC. We are submitting this certification in compliance with COMAR 26.11.03.06 G(6) and Section III.9 of the above reference permit.

Please direct any questions regarding this report to me at 1005 Brandon Shores Road, Suite 100, Baltimore, MD 21226, by phone at 410-787-5423, or by email at [Edwin.much@talenergy.com](mailto:Edwin.much@talenergy.com). You may also contact Melissa Sampson, Environmental Manager, at 410-787-5166, or by email at [Melissa.sampson@talenergy.com](mailto:Melissa.sampson@talenergy.com)

Regards,

Edwin Much  
Regional Environmental Director

Enclosure



# Raven Power

March 27, 2020

Maryland Department of the Environment  
Air and Radiation Management Administration  
1800 Washington Boulevard, Suite 715  
Baltimore, Maryland 21230-1720  
Attn: Daniel Davis, Compliance Program

Re: Raven Power Fort Smallwood LLC, Brandon Shores and H.A. Wagner  
Generating Stations Compliance Certification for Part 70 Operating  
Permit No. 24-003-00468

Dear Mr. Davis:

Enclosed please find the 2019 Compliance Certification for the Brandon Shores and H. A. Wagner generating facilities operated by Raven Power Fort Smallwood LLC. We are submitting this certification in compliance with COMAR 26.11.03.06 G(6) and Section III.9 of the above reference operating permit.

Please direct any questions regarding this report to me at 1005 Brandon Shores Road, Suite 100, Baltimore, MD 21226, by phone at 410-787-5423, or by email at [Edwin.much@talenergy.com](mailto:Edwin.much@talenergy.com). You may also contact Melissa Sampson, Environmental Manager, at 410-787-5166, or by email at [Melissa.sampson@talenergy.com](mailto:Melissa.sampson@talenergy.com)

Regards,

Edwin Much  
Regional Environmental Director

Enclosure



March 27, 2020

Ms. Susan Nash  
Air and Radiation Management Administration  
Maryland Department of the Environment  
1800 Washington Boulevard, Suite 715  
Baltimore, Maryland 21230-1720

Re: Raven Power Fort Smallwood LLC, Brandon Shores and H.A. Wagner  
Generating Stations Compliance Certification for Part 70 Operating  
Permit No. 24-003-00468

Dear Ms. Nash:

Enclosed please find the 2019 Compliance Certification for the Brandon Shores and H. A. Wagner generating facilities owned and operated by Raven Power Fort Smallwood LLC. We are submitting this certification in compliance with COMAR 26.11.03.06 G(6) and Section III.9 of the above reference operating permit.

Please direct any questions regarding this report to me at 1005 Brandon Shores Road, Suite 100, Baltimore, MD 21226, by phone at 410-787-5423, or by email at [Edwin.much@talenergy.com](mailto:Edwin.much@talenergy.com). You may also contact Melissa Sampson, Environmental Manager, at 410-787-5166, or by email at [Melissa.sampson@talenergy.com](mailto:Melissa.sampson@talenergy.com)

Regards,

Edwin Much  
Regional Environmental Director

Enclosure

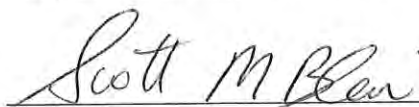


**U.S. ENVIRONMENTAL PROTECTION AGENCY**  
**Federal Operating Permit Program (40 CFR Part 71)**  
**ANNUAL COMPLIANCE CERTIFICATION (A-COMP)**

**A. GENERAL INFORMATION**Permit No. **24-003-0468**Reporting Period: Beg. **01/01/2019** End. **12/31/2019**Source / Company Name: **Fort Smallwood Complex Generating Station**Mailing Address: **1005 Brandon Shores Road, Suite 100**City: **Baltimore**State: **Maryland**ZIP: **21226**Contact person: **Edwin Much**Title: **Regional Environmental Director**Telephone: **(410) 787-5423****CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS****1. Responsible Official**Name: (Last) **Blair** (First) **Scott** (Middle)Title: **Responsible Official**Street: **1005 Brandon Shores Road, Suite 100**City: **Baltimore**State: **Maryland**Zip: **21226**Telephone: **(410) 787-5017** Facsimile: **(410) 787-5299****2. Certification of Truth, Accuracy, and Completeness:**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name (signed):



Date:

3/24/2020Name (printed): **Scott Blair**

Instructions: Use this page to describe the compliance status of each permit term or condition. This page may be used to provide information on 2 different permit terms or conditions. Copy this page as many times as necessary to cover all permit terms and conditions.

**B. COMPLIANCE STATUS**

Describe the compliance status of each permit term for the reporting period. Copy this page as many times as necessary to cover all permit terms and conditions.

**SECTION III: PLANT WIDE CONDITIONS**

**Permit Term (Describe requirements and cross-reference)**

PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION [COMAR 26.11.06.03D]

The Permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

**Compliance Methods for the Above (Description and Citation):**

All construction and demolition projects were completed using best management practices to reduce airborne contaminants.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Permit Term (Describe requirements and cross-reference)**

OPEN BURNING [COMAR 26.11.07]

Except as provided in COMAR 26.11.07.04, the Permittee shall not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the Permittee shall request and receive approval from the Department.

**Compliance Methods for the Above (Description and Citation):**

No open burning occurred at the facility during the period June 1 through August 31, 2019.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Permit Term (Describe requirements and cross-reference)**

AIR POLLUTION EPISODE [COMAR 26.11.05.04]

When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

**Compliance Methods for the Above (Description and Citation):**

The facility has policies and procedures to cover emissions reduction during periods of alert, warning, and emergency air pollution episodes.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Permit Term (Describe requirements and cross-reference)**

REPORT OF EXCESS EMISSIONS AND DEVIATIONS [COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

The Permittee shall comply with the following conditions for occurrences of excess emissions and deviations from requirements of this permit, including those in Section VI - State-only Enforceable Conditions:

- a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;
- b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;
- c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR 26.11.01.07 A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;
- d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.
- e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

**Compliance Methods for the Above (Description and Citation):**

All required monitoring, record keeping and reporting requirements were met during 2019. Semi-annual monitoring reports were submitted on July 26, 2019 and January 27, 2020. All other information requested by the department was submitted in a timely fashion.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Permit Term (Describe requirements and cross-reference)**

ACCIDENTAL RELEASE PROVISIONS [COMAR 26.11.03.03B(23)] and [40 CFR 68]

The Permittee shall submit risk management plans by the date specified in 40 CFR 68.150.

The Permittee shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

**Compliance Methods for the Above (Description and Citation):**

The Brandon Shores Risk Management Plan was updated in July 2019, and the facility is in continuous compliance with 40 CFR 68.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Permit Term (Describe requirements and cross-reference)**

GENERAL TESTING REQUIREMENTS [COMAR 26.11.01.04]

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation shall be provided to the Department.



**Compliance Methods for the Above (Description and Citation):**

No additional testing was requested by the Department. Requests by Department personnel to observe testing were accommodated. All required test results were transmitted to the Department in a timely fashion within the time period required.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Permit Term (Describe requirements and cross-reference)**

EMISSIONS TEST METHODS [COMAR 26.11.01.04]

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described below or other test methods submitted to and approved by the Department.

Reference documents of the test methods approved by the Department include the following:

- a. 40 CFR 60, appendix A
- b. 40 CFR 51, appendix M
- c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources". (January 1991), as amended through Supplement 3, (October 1, 1997)

**Compliance Methods for the Above (Description and Citation):**

Test methods and protocols used for compliance with this permit are in accordance with above requirements and testing protocols were submitted and approved by the Department where required in advance of the testing.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Permit Term (Describe requirements and cross-reference)**

EMISSIONS CERTIFICATION REPORT [COMAR 26.11.01.05-1] and [COMAR 26.11.02.19C] and [COMAR 26.11.02.19D]

The Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

- a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;
- b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:

- (1) Familiar with each source for which the certifications forms are submitted, and
- (2) Responsible for the accuracy of the emissions information;

- c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:

- (1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;
- (2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;
- (3) Amounts, types and analyses of all fuels used;
- (4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;
- (5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:

- (a) Significant maintenance performed,
- (b) Malfunctions and downtime, and

- (c) Episodes of reduced efficiency of all equipment;
- (6) Limitations on source operation or any work practice standards that significantly affect emissions; and
- (7) Other relevant information as required by the Department.

**Compliance Methods for the Above (Description and Citation):**

The annual emissions certification report was submitted on March 29, 2019 as required and all data to support those certifications is maintained both at the facility and electronically at a central location.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Permit Term (Describe requirements and cross-reference)**

COMPLIANCE CERTIFICATION REPORT [COMAR 26.11.03.06G(6) and (7)]

The Permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of this Part 70 permit including each applicable standard, emissions limitation, and work practice for the previous calendar year by April 1 of each year.

a. The compliance certification shall include:

- (1) The identification of each term or condition of this permit which is the basis of the certification;
- (2) The compliance status;
- (3) Whether the compliance was continuous or intermittent;
- (4) The methods used for determining the compliance status of each source, currently and over the reporting period; and
- (5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.

b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

**Compliance Methods for the Above (Description and Citation):**

The Compliance Certification Report was submitted on March 29, 2019 in accordance with the requirements of the permit.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Permit Term (Describe requirements and cross-reference)**

CERTIFICATION BY RESPONSIBLE OFFICIAL [COMAR 26.11.02.02F]

All application forms, reports, and compliance certifications submitted pursuant to this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

The certification shall be in the following form:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

**Compliance Methods for the Above (Description and Citation):**

All application forms, reports, and compliance certifications submitted pursuant to this permit were certified by a responsible official as to their truth, accuracy, and completeness.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Permit Term (Describe requirements and cross-reference)**

SAMPLING AND EMISSIONS TESTING RECORD KEEPING [COMAR 26.11.03.06C(5)]

The Permittee shall gather and retain the following information when sampling and testing for compliance demonstrations:

- a. The location as specified in this permit, and the date and time that samples and measurements are taken;
- b. All pertinent operating conditions existing at the time that samples and measurements are taken;
- c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;
- d. The identity of the Permittee, individual, or other entity that performed the analysis;
- e. The analytical techniques and methods used; and
- f. The results of each analysis.

**Compliance Methods for the Above (Description and Citation):**

All required data from sampling and emissions testing for compliance demonstrations are kept both at the facility and electronically at a central location.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Permit Term (Describe requirements and cross-reference)**

GENERAL RECORDKEEPING [COMAR 26.11.03.06C(6)]

The Permittee shall retain records of all monitoring data and information that support the compliance certification for a period of five (5) years from the date that the monitoring, sample measurement, application, report or emissions test was completed or submitted to the Department.

These records and support information shall include:

- a. All calibration and maintenance records;
- b. All original data collected from continuous monitoring instrumentation;
- c. Records which support the annual emissions certification; and
- d. Copies of all reports required by this permit.

**Compliance Methods for the Above (Description and Citation):**

All required data that support the compliance certifications are kept both at the facility and electronically at a central location for a period of no less than five (5) years.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Permit Term (Describe requirements and cross-reference)**

GENERAL CONFORMITY [COMAR 26.11.26.09]

The Permittee shall comply with the general conformity requirements of 40 CFR 93, Subpart B and COMAR 26.11.26.09.

**Compliance Methods for the Above (Description and Citation):**

During 2019, the facility was in continuous compliance with the general conformity requirements of 40 CFR 93, Subpart B and COMAR 26.11.26.09.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Permit Term (Describe requirements and cross-reference)**

ASBESTOS PROVISIONS [40 CFR 61, Subpart M]

The Permittee shall comply with 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

**Compliance Methods for the Above (Description and Citation):**

Raven employs licensed asbestos abatement contractors for all work involving the removal, clean-up, or disposal of asbestos containing materials, and all work is required to be completed in accordance with 40 CFR 61 Subpart M.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Permit Term (Describe requirements and cross-reference)**

OZONE DEPLETING REGULATIONS [40 CFR 82, Subpart F]

The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in subpart B:

- a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.
- b. Equipment used during the maintenance, service, repair or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repairs or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
- d. Persons performing maintenance, service, repairs or disposal of appliances shall certify with the Administrator pursuant to 40 CFR 82.162.
- e. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.166.
- f. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
- g. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

**Compliance Methods for the Above (Description and Citation):**

Refrigerant recovery and maintenance methods were followed as required.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance



**Permit Term (Describe requirements and cross-reference)**

ACID RAIN PERMIT

The Permittee shall comply with the provisions and all applicable requirements of the Phase II Acid Rain Permit.

**Compliance Methods for the Above (Description and Citation):**

All requirements of the Acid Rain Permit were met as required. See individual unit requirements below for details.

Status (Check one):  Intermittent Compliance  Continuous Compliance

**SECTION IV: PLANT SPECIFIC CONDITIONS**

**Emissions Unit ID(s):** FSC-BS-Unit 1 and FSC-BS-Unit 2

**Permit Term (Describe requirements and cross-reference)**

**Visible Emissions Limitation**

COMAR 26.11.09.05 A(2) - Visible Emissions

In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

COMAR 26.11.09.05 A(3) - Exceptions

Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

NSPS 40 CFR §60.42Da(b) – Standards for particulate matter (PM)

On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that: (2) Exhibit greater than 20 percent opacity except for one six-minute period per hour of not more than 27 percent opacity.

- (1) An owner or operator of an affected facility that elects to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart is exempt from the opacity standard specified in this paragraph (b) of this section.

COMAR 26.11.09.05C – Control of Visible Emissions

COMAR 26.11.09.05C that allows for the discontinuation of a COM on fuel burning equipment that is equipped with a flue gas desulfurization device. If operation of the opacity monitor is discontinued, the regulation requires an alternative monitoring plan to be submitted to and approved by the Department which includes a schedule for monthly Method 9 visible emissions observations.

As an alternative to the COMAR 26.11.01.10 requirement to use a COM and until an alternate monitoring plan is submitted and approved:

- (1) The Permittee shall perform a visible emissions observation using an EPA Reference Method 9 of the exhaust from the scrubber stack. The observation shall be performed once a week for one hour period of time.
- (2) If after a six month period time, no violations of the opacity limit are observed, the frequency of observation may be reduced to once per month. At any point in time that a violation of the opacity limit is observed, the observations shall return to the weekly schedule until another six month period elapses without a violation.

#### NSPS §60.49Da(s) – Emissions Monitoring

The owner or operator shall prepare and submit to the Administrator for approval a unit-specific monitoring plan for each monitoring system, at least 45 days before commencing certification testing of the monitoring systems. The owner or operator shall comply with the requirements in your plan. The plan must address the requirements in paragraphs (s)(1) through (6) of this section.

- (1) Installation of the CEMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of the exhaust emissions (e.g., on or downstream of the last control device);
- (2) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems;
- (3) Performance evaluation procedures and acceptance criteria (e.g., calibrations, relative accuracy test audits (RATA), etc.);
- (4) Ongoing operation and maintenance procedures in accordance with the general requirements of §60.13(d) or part 75 of this chapter (as applicable);
- (5) Ongoing data quality assurance procedures in accordance with the general requirements of §60.13(d) or part 75 of this chapter (as applicable);
- (6) Ongoing recordkeeping and reporting procedures in accordance with the requirements of this subpart.

#### COMAR Visible Emissions Limitation

The Permittee shall maintain all records of Method 9 visible emissions observations. [Reference: COMAR 26.11.03.06C]

#### NSPS §60.07(f) – Emissions Notification and Recordkeeping

Any owner or operator subject to the provisions of this part shall 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.

#### COMAR Visible Emissions Limitation

The Permittee shall submit to the Department results of visible emissions observations upon request. [COMAR 26.11.03.06C]

#### NSPS §60.45 Emissions and Fuel Monitoring Reporting

(g) Excess emission and monitoring system performance reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30<sup>th</sup> day following the end of each six-month period. Each excess emission and MSP report shall include the information required in §60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

- (4) Particulate Matter. Excess emissions for affected facilities using a CEMS for measuring PM are defined as any boiler operating day period during which the average emissions (arithmetic average

of all operating one-hour periods) exceed the applicable standards in §60.42. Affected facilities using PM CEMS must follow in the most current applicable compliance and monitoring provisions in §§60.48Da and 60.49Da of subpart Da of this part.

**Compliance Methods for the Above (Description and Citation):**

Brandon Shores utilizes a PM CEMs in lieu of a continuous opacity monitor. In accordance with COMAR 26.11.01.10G, the Brandon Shores Generating Station maintains all necessary records and quarterly summary reports were submitted no later than 30 days following the end of each calendar quarter. No periods of intermittent compliance with the particulate matter standard due to startup, shutdown, malfunction, moving load, or soot blowing events occurred or were reported in the 2019 quarterly excess emission reports or semi-annual deviation monitoring reports. Monthly 60-minute EPA Reference Method 9 tests were performed and the results were submitted to the Department as part of the quarterly CEM reports.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-BS-Unit 1 and FSC-BS-Unit 2

**Permit Term (Describe requirements and cross-reference)**

**Control of Particulate Matter**

COMAR 26.11.09.06B(3) – Solid Fuel Burning Equipment.

A person may not cause or permit particulate matter caused by the combustion of solid fuel to be discharged into the atmosphere in excess of...0.03 gr/scfd @ 50% excess air.

COMAR 26.11.09.06C – Determination of Compliance (by stack test)

Compliance with the particulate matter emissions standards in this regulation shall be calculated as the average of 3 test runs using EPA Test Method 5 or other United States Environmental Protection Agency test method approved by the Department.

NSPS §60.42 Standard for particulate matter (PM)

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that:

(1) Contain PM in excess of 43 nanograms per joule (ng/J) heat input (0.10 lb/MMBtu) derived from fossil fuel or fossil fuel and wood residue.

CPCN – Case No. 9075

To avoid triggering the Prevention of Significant Deterioration (PSD) applicability for PM and PM-10 for this Project: (a) Emissions from Brandon Shores Units 1 and 2 each shall not exceed the following:

PM/PM-10: 0.015 lb/MMBtu (filterable), as determined by (1) the average of three stack tests, or (2) if continuous emission monitoring for particulate matter is used to demonstrate compliance, a 24-hour rolling average;

Total PM/PM-10: 0.034 lb/MMBtu (filterable and condensable), as determined by the average of three stack tests. [Reference: CPCN - Case No 9075, Section VII Condition (21)(a)]

COMAR 26.11.01.04A(1) – Control of Particulate Matter Emissions

The Permittee shall conduct annual testing using EPA Reference Methods of 40 CFR Part 60, Appendix A. The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date. Note: The Permittee may petition the Department to use any Method 5 QC/QA testing for the PM CEMS to satisfy the requirement of the annual compliance stack test. [Reference: COMAR 26.11.03.06C]



NSPS §60.42Da(v) – Particulate Matter Emissions Monitoring

(v) The owner or operator of an affected facility using a CEMS measuring PM emissions to meet requirements of this subpart shall install, certify, operate, and maintain the CEMS as specified in paragraphs (v)(1) through (v)(4) of this section.

- (1) The owner or operator shall conduct a performance evaluation of the CEMS according to the applicable requirements of §60.13, Performance Specification 11 in Appendix B of this part, and procedure 2 in Appendix F of this part.
- (2) During each PM correlation testing run of the CEMS required by Performance Specification 11 in Appendix B of this part, PM and O<sub>2</sub> (or CO<sub>2</sub>) data shall be collected concurrently (or within a 30- to 60-minute period) by both the CEMS and performance tests conducted using the following test methods.
  - (i) For PM, Method 5 or 5B of Appendix A-3 of this part or Method 17 of Appendix A-6 of this part shall be used; and
  - (ii) For O<sub>2</sub> (or CO<sub>2</sub>), Method 3A or 3B of Appendix A-2 of this part, as applicable shall be used.
- (3) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in Appendix F of this part. Relative Response Audits must be performed annually and Response Correlation Audits must be performed every 3 years.
- (4) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in §60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (i.e. reference method) data and performance test (i.e. compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT)

COMAR Particulate Matter Standard – Control of Particulate Matter

- (1) The Permittee shall use reasonable efforts to keep each PM CEMS operating and producing data whenever either Unit served by the PM CEMS is operating. Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter concentration in grains per dry standard cubic feet on a six hour rolling average [Reference: COMAR 26.11.06.03C and Condition 25 - Consent Decree of June 1, 2007]
- (2) Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter concentration in grains per dry standard cubic feet on a 24-hour rolling average basis, unless State or federal law or regulations require a different averaging period or different procedures, in which case, The Permittee shall be subject to applicable state or federal requirements. The Permittee shall maintain, in an electronic database, the average emission values recorded by each PM CEMS. [Reference: COMAR 26.11.06.03C and Condition 24 - Consent Decree of June 1, 2007]

NSPS §60.49Da(s) – Emissions Monitoring.

The owner or operator shall prepare and submit to the Administrator for approval a unit-specific monitoring plan for each monitoring system, at least 45 days before commencing certification testing of the monitoring systems. The owner or operator shall comply with the requirements in your plan. The plan must address the requirements in paragraphs (s)(1) through (6) of this section.

- (1) Installation of the CEMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of the exhaust emissions (e.g., on or downstream of the last control device);
- (2) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems;
- (3) Performance evaluation procedures and acceptance criteria (e.g., calibrations, relative accuracy test audits (RATA), etc.);



- (4) Ongoing operation and maintenance procedures in accordance with the general requirements of §60.13(d) or part 75 of this chapter (as applicable);
- (5) Ongoing data quality assurance procedures in accordance with the general requirements of §60.13(d) or part 75 of this chapter (as applicable);
- (6) Ongoing recordkeeping and reporting procedures in accordance with the requirements of this subpart.

#### COMAR Particulate Matter Standard – Control of Particulate Matter

The Permittee shall operate and maintain a PM CEMS to produce valid data whenever a Unit is operation. Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter Concentration in grains per dry standard cubic feet on a six hour rolling average.  
[Reference: COMAR 26.11.06.03C]

#### NSPS §60.07(f) - Notification and Record keeping

Any owner or operator subject to the provisions of this part shall 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.

#### CPCN – Case No. 9075

The Permittee shall operate and maintain a PM CEMS to produce valid data whenever a Unit is operation. Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter concentrations and calculating emissions in units of lb/MMBtu on a 24 hour rolling average basis.  
[Reference: COMAR 26.11.06.03C]

#### COMAR Particulate Matter Standard – Control of Particulate Matter

The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to test and a notice of intent to test at least 10 days prior to the scheduled test date. The Permittee shall submit the results of stack tests in a final report within 60 days from test completion. [Reference: COMAR 26.11.01.04A].

The Permittee shall report to the Department all periods of excess emissions in quarterly PM CEMS reports. All data shall be reported in six hour rolling averages. [Reference: COMAR 26.11.03.06C]

#### NSPS §60.45 Emissions and fuel-monitoring.

(g) Excess emission and monitoring system performance (MSP) reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in §60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

- (4) Particulate matter. Excess emissions for affected facilities using a CEMS for measuring PM are defined as any boiler operating day period during which the average emissions (arithmetic average of all operating one-hour periods) exceed the applicable standards in §60.42. Affected facilities using PM CEMS must follow the most current applicable compliance and monitoring provisions in §§60.48Da and 60.49Da of subpart Da of this part.

#### CPCN – Case No. 9075

Final results of each compliance stack test must be submitted to MDE-ARMA within 60 days after completion of the test. Analytical data shall be submitted to MDE-ARMA directly from the emission testing company. [Reference: CPCN Case No. 9075 Section X. Condition 31]

The Permittee shall report to the Department all period of excess emissions in quarterly PM CEMS. All data shall be reported in 24 hour rolling averages. [Reference: COMAR 26.11.03.06C]

The Permittee shall submit a report to MDE-ARMA to be postmarked by the 30th day following the end of each calendar quarter that summarizes the monthly and consecutive rolling 12-month total emissions of PM, PM10 separately for each boiler, the material handling operations, and for total emissions of those pollutants from the Brandon Shores facility. [Reference: CPCN Case No. 9075 Section X. Condition 30]

**Compliance Methods for the Above (Description and Citation):**

The particulate matter CEMs were operated and maintained as required. Relative Response Audits of the particulate matter CEMs were performed during the annual PM testing and results were submitted to the Department along with PM test results within the time required. The CEMS values for filterable particulate matter (FPM) were all monitored and found to be below the FPM limits.

FPM testing was performed at Brandon Shores on Unit 1 on August 13, 2019, and on Unit 2 on August 27, 2019, with results of 0.004 gr/dscf @ 50% EA (0.008 lb/MMBtu) and 0.005 gr/dscf @ 50% EA (0.010 lb/MMBtu), respectively, with all results less than the limits. Total PM (filterable plus condensable) results from the same tests were 0.010 lb/MMBtu and 0.014 lb/MMBtu, for Units 1 and 2, respectively, and were all below the limits.

Test results were submitted directly to the MDE within the time period required by the permit. Records are maintained as required in hard copy at the plants and electronically at a central location readily accessible.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-BS-Unit 1 and FSC-BS-Unit 2

**Permit Term (Describe requirements and cross-reference)**

**Control of Sulfur Dioxide Emissions**

COMAR 26.11.09.07 - Control of Sulfur Oxides from Fuel Burning Equipment.

A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV:

- (a) All solid fuels, 1.0 percent;
- (b) Distillate fuel oils, 0.3 percent; (Note: for No 2 fuel oil on start-ups)
- (c) Residual fuel oils, 1.0 percent.

NSPS §60.43 – Standard for sulfur dioxide (SO<sub>2</sub>).

(a) Except as provided under paragraph (d) of this section, on and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that contain SO<sub>2</sub> in excess of:

- (1) 340 ng/J heat input (0.80 lb/MMBtu) derived from liquid fossil fuel or liquid fossil fuel and wood residue.
- (2) 520 ng/J heat input (1.2 lb/MMBtu) derived from solid fossil fuel or solid fossil fuel and wood residue, except as provided in paragraph (e) of this section."

(c) Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels.

Note: The NSPS Standard in Subpart D of 1.2 lb/MM Btu is approximately equivalent to 0.8% percent sulfur in coal.

COMAR 26.11.27.03C - SO<sub>2</sub> Emission Limitations.

(1) Except as provided in §E of this regulation, annual SO<sub>2</sub> emissions from each affected electric generating unit may not exceed the number of tons in §C (2) of this regulation.

(2) Annual Tonnage Limitations.

Affected Unit	Annual SO <sub>2</sub> Tonnage Limitations Beginning
	January 1, 2013
Brandon Shores Unit 1	5,392 tons
Brandon Shores Unit 2	5,627 tons

COMAR 26.11.27.03E – System-Wide Compliance Determinations

(1) Compliance with the emission limitations in §§ B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.

(2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§ B and C of this regulation.

(3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§ B and C of this regulation applicable to that electric generating unit.

Acid Rain Provisions

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the Part 70 permit as Appendix A.

COMAR 26.11.03.06C – Control of Sulfur Oxides

The Permittee shall perform quality control/quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. [Reference 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].

COMAR 26.11.01.11 – Control of Sulfur Oxides

B(2). The owner or operator of fuel-burning equipment burning coal, with a heat input capacity of 100 million Btu per hour or greater install CEMs to measure and record sulfur dioxide, nitrogen oxide, either oxygen or carbon dioxide, and flow. [Reference: COMAR 26.11.01.11B(2)]

D. The Permittee shall perform quality control/quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix B. [Reference: COMAR 26.11.01.11D]

NSPS §60.45 – Emissions and fuel monitoring.

(a) Each owner or operator of an affected facility subject to the applicable emissions standard shall install, calibrate, maintain, and operate continuous opacity monitoring system (COMS) for measuring opacity and a CEMS for measuring SO<sub>2</sub> emissions, NO<sub>x</sub> emissions, and either oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) except as provided in paragraph (b) of this section.

Healthy Air Act COMAR 26.11.27.05 – Monitoring and Reporting Requirements

Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75. [Reference: COMAR 26.11.27.05A]

Acid Rain Provisions

The Permittee shall install, certify, operate, and maintain a SO<sub>2</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B - Monitoring Provisions. [Reference: §75.10(a)(1) and Acid Rain Permit]

COMAR 26.11.01.11E(2) – Control of Sulfur Oxides

The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E. [Reference: COMAR 26.11.01.11E(2)].

NSPS § 60.07 – Notification and Record keeping

(f) Any owner or operator subject to the provisions of this part shall 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.

Healthy Air Act COMAR 26.11.01.05A – Recordkeeping Requirements

The Permittee shall maintain records sufficient to demonstrate compliance with the requirements of the Healthy Air Act, COMAR 26.11.27.

Acid Rain Provisions

The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75. [Reference: See Acid Rain Permit]

COMAR 26.11.01.11E – Record Keeping and Reporting Requirements.

(1) CEM System Downtime Reporting Requirements.

(a) All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the breakdown.

(b) The system breakdown report required by § E(1)(a) of this regulation shall include the reason, if known, for the breakdown and the estimated period of time that the CEM will be down. The owner or operator of the CEM shall notify the Department by telephone when an out-of-service CEM is back in operation and producing data that has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in COMAR 26.11.31, and is producing data.

(2) CEM Data Reporting Requirements.

(a) All test results shall be reported in a format approved by the Department.

(b) Certification testing shall be repeated when the Department determines that the CEM data may not meet performance specifications because of component replacement or other conditions that affect the quality of generated data.



(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:

- (i) The cause, time periods, and magnitude of all emissions which exceed the applicable emission standards;
- (ii) The source downtime including the time and date of the beginning and end of each downtime period and whether the source downtime was planned or unplanned;
- (iii) The time periods and cause of all CEM downtime including records of any repairs, adjustments, or maintenance that may affect the ability of the CEM to meet performance specifications of emission data;
- (iv) Quarterly totals of excess emissions, installation downtime, and CEM downtime during the calendar quarter;
- (v) Quarterly quality assurance activities; and
- (vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status; and
- (vii) other information required by the Department that is determined to be necessary to evaluate the data, to ensure that compliance is achieved, or to determine the applicability of this regulation.

(d) All information required by this regulation to be reported to the Department shall be retained and made available for review by the Department for a minimum of 2 years from the time the report is submitted.

#### NSPS §60.45 – Emissions and fuel monitoring.

(g) Excess emission and monitoring system performance reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six month period. Each excess emission and MSP report shall include the information required in §60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

(2) Sulfur dioxide. Excess emissions for affected facilities are defined as:

- (i) For affected facilities electing not to comply with §60.43(d), any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of SO<sub>2</sub> as measured by a CEMS exceed the applicable standard in §60.43; or
- (ii) For affected facilities electing to comply with §60.43(d), any 30 operating day period during which the average emissions (arithmetic average of all one-hour periods during the 30 operating days) of SO<sub>2</sub> as measured by a CEMS exceed the applicable standard in §60.43. Facilities complying with the 30-day SO<sub>2</sub> standard shall use the most current associated SO<sub>2</sub> compliance and monitoring requirements in §§60.48Da and 60.49Da of subpart Da of this part or §§60.45b and 60.47b of subpart Db of this part, as applicable.

#### Healthy Air Act COMAR 26.11.27.05 – Monitoring and Reporting Requirements

B. Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.

C. Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this

- chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department.

**Acid Rain Provisions**

The Permittee shall comply with the reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. [Reference: See the Acid Rain Permit.]

**Compliance Methods for the Above (Description and Citation):**

Brandon Shores Units 1 and 2 are equipped with non-bypass flue gas desulfurization systems which allow for an exception on sulfur-in-fuel content per COMAR 26.11.09.07B(1):

- (1) Fuel containing sulfur in excess of the amounts specified in §A of this regulation may be burned, sold, or made available for sale provided control equipment to desulfurize stack gases has been installed or other methods or devices are employed by the user or purchaser such that the discharge of sulfur dioxide to the atmosphere does not exceed that which would occur if fuels meeting the sulfur requirements of §A of this regulation were burned.

The Brandon Shores Generating Station continuously monitored sulfur dioxide emissions in accordance with 40 CFR Part 75, subpart §75.10 A(1). Compliance with the 1.2 lb/MMBtu sulfur dioxide limit is determined on a rolling 3-hour basis and quarterly summary reports were submitted to the Department following each calendar quarter which detailed excess emissions incidents.

Compliance with the Annual SO<sub>2</sub> Tonnage Limitations were demonstrated on a system-wide basis.

The annual HAA summary report was submitted to the Department on February 26, 2020 which detailed total sulfur dioxide emissions from each affected unit.

Raven Power holds SO<sub>2</sub> allowances for both Brandon Shores units in accordance with 40 CFR 72.9 (c)(1).

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-BS-Unit 1 and FSC-BS-Unit 2

**Permit Term (Describe requirements and cross-reference)**

**Best Available Control Technology (BACT) for Sulfuric Acid Mist (SAM)**

Emissions of SAM shall not exceed 0.027 pounds per million Btu (3-hour average). Compliance with this standard will be determined by the average of 3 valid stack test runs using methods approved by the Department. [Reference: CPCN Case No. 9075 - Section V. condition (17)(b)]

The Permittee shall perform quality control/quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. [Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C]

The Permittee shall operate the boilers in accordance the Operations and Maintenance Plan (the Plan). The Plan shall include a description of good combustion practices and methods to be employed to minimize SAM emissions and methods used to estimate emissions of SAM emissions.

In accordance with the Operations and Maintenance Plan, the Permittee shall continuously monitor estimated SAM emissions by using a data acquisition system to collect data from the SO<sub>2</sub> CEM and apply a factor of 0.003 SAM/SO<sub>2</sub> in order to calculate SAM emissions for recordkeeping and reporting purposes. The Permittee may petition the Department to revise the factor based upon the results of additional compliance stack tests. [Reference:

COMAR 26.11.03.06C and CPCN Case No. 9075 - Section V condition (17)(c); Letter dated March 4, 2013: Results of May 2012 stack test]

The Permittee shall maintain a record of the data collected by the data acquisition system which calculates SAM emissions on a continuous basis. In addition, the Permittee shall maintain all records necessary to demonstrate compliance with the Operations and Maintenance Plan, including date of occurrence and duration of any startup, shutdown and malfunctions. [Reference: COMAR 26.11.03.06C and CPCN Case No. 9075 - Section V condition 17c. & Section X condition 29.]

The Permittee shall submit a report to MDE-ARMA to be postmarked by the 30th day following the end of each calendar quarter that:

a) Summarizes separately the date, time, and duration of each startup, shutdown, or malfunction that occurred at Brandon Shores Units 1 and 2 and associated pollution control equipment during the prior period for the purposes of complying with BACT and LAER. The report shall include total monthly and consecutive 12-month total hours of startup, shutdown, and malfunction for each unit;

b) Summarizes the monthly and consecutive rolling 12-month total emissions of ... SAM separately for each boiler, the material handling operations, and for total emissions of those pollutants from the Brandon Shores facility.

The Permittee shall report to the Department within 30 days after the end of each calendar quarter, any 3-hour block average estimated SAM emission values calculated by the DAS in accordance with the O&M Plan that were greater than 0.027 pounds per MMBtu while the unit was burning primary fuel. [Reference: COMAR 26.11.03.06 C and CPCN Case No, 9075 Section X. condition 30]

**Compliance Methods for the Above (Description and Citation):**

The Brandon Shores Units are continuously operated in accordance with an Operation and Maintenance Plan to Minimize Sulfuric Acid Mist Emissions. To achieve greater SAM removal, the Brandon Shores AQCS includes equipment to provide for the injection of lime reagent into the flue gas streams. Sulfuric acid mist testing was performed at Brandon Shores on Unit 2 on February 14, 2012 and on Unit 1 on May 22, 2012 and test results were submitted to the MDE as required by the permit. Records of data collected by the DAS are maintained in an electronic database as required and are readily accessible.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-BS-Unit 1 and FSC-BS-Unit 2

**Permit Term (Describe requirements and cross-reference)**

**Cross State Air Pollution Rule (CSAPR)**

The Permittee shall comply with 40 CFR Part 97 Subpart AAAAA (TR NO<sub>x</sub> Annual Trading Program) and 40 CFR 97.406 (TR NO<sub>x</sub> Annual Trading Program requirements) applicable limits.

The Permittee shall comply with 40 CFR Part 97 Subpart BBBB (TR NO<sub>x</sub> Ozone Season Trading Program) and 40 CFR 97.506 (TR NO<sub>x</sub> Ozone Season Trading Program requirements) applicable limits.

The Permittee shall comply with 40 CFR Part 97 Subpart CCCCC (TR SO<sub>2</sub> Group 1 Trading Program) and 40 CFR 97.606 (TR SO<sub>2</sub> Group 1 Trading Program requirements) applicable limits.

The Permittee shall comply with the monitoring, recordkeeping, and reporting requirements found in §97.406, §97.430, §97.434, for the NO<sub>x</sub> Annual Trading Program.

The Permittee shall comply with the monitoring, recordkeeping, and reporting requirements found in §97.506, §97.530, §97.533, §97.534, for the NO<sub>x</sub> Ozone Season Trading Program.

The Permittee shall comply with the monitoring, recordkeeping and reporting requirements found in §97.606, §97.630, §97.631, §97.632, §97.633, §97.634.

The Permittee operates continuous emission monitoring system (CEMS) pursuant to 40 CFR Part 75, Subpart B (for SO<sub>2</sub> monitoring) and 40 CFR Part 75, Subpart H (for NO<sub>x</sub> monitoring).

**Compliance Methods for the Above (Description and Citation):**

Raven Power maintains compliance with the Title V operating permit and CSAPR rule for the Brandon Shores Generating Facility in accordance with 40 CFR Part 97. NO<sub>x</sub>, SO<sub>2</sub> and ozone season NO<sub>x</sub> are continuously monitored and reported as required. Raven Power holds SO<sub>2</sub>, NO<sub>x</sub>, and ozone season NO<sub>x</sub> allowances for both Brandon Shores units in accordance with 40 CFR 97.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-BS-Unit 1 and FSC-BS-Unit 2

**Permit Term (Describe requirements and cross-reference)**

**Control of NO<sub>x</sub> Emissions**

NO<sub>x</sub> RACT requirements - [Reference-NO<sub>x</sub> RACT Averaging Plan Consent Decree dated February 18, 2016 and COMAR 26.11.09.08]

Requires that the Fort Smallwood Road Complex meet the following NO<sub>x</sub> RACT limits:

Table 1 – Summary of NO <sub>x</sub> RACT Averaging Plan Limits (2016)		
Facility	Unit	RACT Limit, lb/MMBtu
Brandon Shores	1	0.5
	2	0.5
H.A. Wagner	1	0.3
	2	0.5
	3	0.5
	4	0.3

Individual unit compliance with NO<sub>x</sub> RACT requirements will be determined daily on a 30-day rolling average basis. Annual compliance will also be demonstrated by showing that annual mass emissions from the units in the averaging plan are less than 80% of the mass emissions that would have been allowed on an individual basis.

NSPS §60.44 – Standard for nitrogen oxides (NO<sub>x</sub>).

(a) Except as provided under paragraph (e) of this section, on and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that contain NO<sub>x</sub>, expressed as NO<sub>2</sub> in excess of:

(2) 129 ng/J heat input (0.30 lb/MM Btu) derived from liquid fossil fuel, liquid fossil fuel and wood residue, or gaseous fossil fuel and wood residue,



(3) 300 ng/J heat input (0.70 lb/MMBtu) derived from solid fossil fuel or solid fossil fuel and wood residue (except lignite or a solid fossil fuel containing 25 percent, by weight, or more of coal refuse).

Healthy Air Act COMAR 26.11.27.03B – NO<sub>x</sub> Emission Limitations.

(1) Except as provided in §E of this regulation, annual NO<sub>x</sub> emissions from each affected electric generating unit may not exceed the number of tons in §B(2) of this regulation.

(2) Annual Tonnage Limitations.

Affected Unit	Annual NO <sub>x</sub> Tonnage Limitations Beginning
	January 1, 2012
Brandon Shores Unit 1	2,414 tons
Brandon Shores Unit 2	2,519 tons

(3) Except as provided in §E of this regulation, ozone season NO<sub>x</sub> emissions from each affected electric generating unit may not exceed the number of tons in §B(4) of this regulation.

Affected Unit	Ozone Season NO <sub>x</sub> Tonnage Limitations Beginning May 1, 2012
Brandon Shores Unit 1	1,124 tons
Brandon Shores Unit 2	1,195 tons

(7) Electric System Reliability During Ozone Seasons.

(a) An exceedance of the NO<sub>x</sub> limitations in §B(4) or (6) of this regulation which occurs because PJM Interconnection, LLC or a successor independent system operator, acts to invoke "Maximum Emergency Generation", "Load Reduction", "Voltage Reduction", "Curtailment of Non-essential Building Load", or "Manual Load Dump" procedures in accordance with the current PJM Manual, or a PJM alert preceding such action as to a generating unit that has temporarily shut down in order to avoid potential interruption in electric service and maintain electric system reliability is not a violation of this chapter provided that:

(i) Within 36 hours following the action, the owner or operator of the affected electric generating unit or units notifies the Manager of the Air Quality Compliance Program of the action taken by PJM Interconnection and provides the Department with documentation of the action which is satisfactory to the Department;

(ii) Within 48 hours after completion of the action, the owner or operator of the affected unit or units provides the Department with the estimated NO<sub>x</sub> emissions in excess of the emission limitation; and

(iii) See State-only enforceable section of the permit for additional requirement.

(b) The owner or operator of an electric generating unit or system, as applicable, shall send written notice to the Manager of the Air Quality Compliance Program not later than 5 business days following the day when the cumulative ozone season NO<sub>x</sub> emissions of an electric generating unit or system, as applicable, are:

(i) Equal to approximately 80 percent of the applicable ozone season emission limitation;  
and

(ii) Equal to the applicable ozone season emission limitation.

#### COMAR 26.11.27.03E – System-Wide Compliance Determinations.

(1) Compliance with the emission limitations in §§B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.

(2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§B and C of this regulation.

(3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.

#### Acid Rain Provisions

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station. Note: A renewal Phase II Acid Rain Permit will be issued in conjunction with this Part 70 permit and is attached to the permit as Appendix A.

#### NSPS, Healthy Air Act, & Acid Rain Provisions – Testing Requirements

The Permittee shall perform quality control/quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75 Appendix A. [Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C]

#### NO<sub>x</sub> RACT Monitoring Requirements

All units included in the Averaging Plan have continuous emissions monitors (CEM) for monitoring NO<sub>x</sub> emissions. These units follow the operations, maintenance, recordkeeping and reporting requirements contained in 40 CFR Part 75. [Reference: Consent Agreement dated February 16, 2016]

The Permittee shall operate, calibrate, and maintain a certified NO<sub>x</sub> CEM or an alternative NO<sub>x</sub> monitoring method approved by the Department and the EPA on each installation. [Reference: COMAR 26.11.09.08C(3)]

The Permittee certify CEMs in accordance with Part 75, Appendix A. [Reference: COMAR 26.11.09.08B(2)(b)]

#### NSPS §60.45 - Monitoring Requirements

Each owner or operator of an affected facility subject to the applicable emissions standard shall install, calibrate, maintain, and operate continuous opacity monitoring system (COMS) for measuring opacity and a continuous emissions monitoring system (CEMS) for measuring SO<sub>2</sub> emissions, NO<sub>x</sub> emissions, and either oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) except as provided in paragraph (b) of this section.

#### Healthy Air Act COMAR 26.11.27.05 – Monitoring and Reporting Requirements

Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.

#### Acid Rain Provisions

The Permittee shall install, certify, operate, and maintain a NO<sub>x</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B-Monitoring Provisions. [Reference: §75.10(a)(1) and Acid Rain Permit]

#### NO<sub>x</sub> RACT Record Keeping Requirements

The Permittee shall maintain at each of the Generating Units records and information adequate to verify the calculations used to demonstrate compliance with the Averaging Plan's requirements, and shall make these records and information available to the Department upon request. The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E. [Reference: COMAR 26.11.01.11A(2) and COMAR 26.11.01.11E]

#### NSPS § 60.07 NO<sub>x</sub> Emission Standard – Notification and record keeping

(f) Any owner or operator subject to the provisions of this part shall 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.

#### Healthy Air Act COMAR 26.11.27 – Record Keeping Requirements

The Permittee shall maintain records sufficient to demonstrate compliance with the requirements of the Healthy Air Act, COMAR 26.11.27. [Reference: COMAR 26.11.01.05A]

#### Acid Rain Provisions

The Permittee shall comply with the record keeping requirements of 40 CFR Part 72 and 40 CFR Part 75. [Reference: See Acid Rain Permit]

#### NO<sub>x</sub> RACT Reporting Requirements

Quarterly reports will be submitted within 30 days of the end of each reporting quarter summarizing compliance with the Averaging Plan. [Reference: Consent Agreement dated February 18, 2016]

The Permittee shall submit quarterly emission reports of CEM data to the Department on or before the thirtieth day of the month following the end of each calendar quarter. [Reference: COMAR 26.11.09.08K(1)]

The Permittee shall comply with the reporting requirements of COMAR 26.11.01.11E. (Record Keeping and Reporting Requirements). [Reference: COMAR 26.11.01.11E]

#### NSPS §60.45 NO<sub>x</sub> Emissions Standard – Reporting Requirements

(g) Excess emission and monitoring system performance reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six month period. Each excess emission and MSP report shall include the information required in §60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

(3) Nitrogen oxides. Excess emissions for affected facilities using a CEMS for measuring NO<sub>x</sub> are defined as:

(i) For affected facilities electing not to comply with §60.44(e), any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards in §60.44; or

(ii) For affected facilities electing to comply with §60.44(e), any 30 operating day period during which the average emissions (arithmetic average of all one-hour periods during the 30 operating days) of NO<sub>x</sub> as measured by a CEMS exceed the applicable standard in §60.44. Facilities complying with the 30-day NO<sub>x</sub> standard shall use the most current associated NO<sub>x</sub> compliance and monitoring requirements in §§60.48Da and 60.49Da of subpart Da of this part.

Healthy Air Act COMAR 26.11.27.05 – Monitoring and Reporting Requirements

B. Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.

C. Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department.

Acid Rain Provisions

The Permittee shall comply with the reporting requirements of 40 CFR Part 72 and 40 CFR Part 75. [Reference: See the Acid Rain Permit.]

Additional reporting - CPCN 9075

The Permittee shall submit a report to MDE-ARMA to be postmarked by the 30th day following the end of each calendar quarter that summarizes the monthly and consecutive rolling 12-month total emissions of NO<sub>x</sub> separately for each boiler and for total emissions of NO<sub>x</sub> from the Brandon Shores facility. [Reference: CPCN Case No. 9075 Section X. Condition 30]

**Compliance Methods for the Above (Description and Citation):**

The Brandon Shores Generating Station operates and maintains NO<sub>x</sub> emissions controls and a certified NO<sub>x</sub> CEM approved by the Department and the EPA on each unit. NO<sub>x</sub> CEMs are certified in accordance with Part 75, Appendix A.

Quarterly reports detailing NO<sub>x</sub> emissions compliance data were submitted to the Department following the end of each calendar quarter, and an annual report detailing NO<sub>x</sub> and ozone season NO<sub>x</sub> was submitted to the Department on February 26, 2020. Any reports of daily non-compliance are submitted to the Department and EPA Region III quarterly. Written notice is sent to the Manager of the Air Quality Compliance Program when cumulative ozone season NO<sub>x</sub> emissions are equal to or greater than 80 per cent of the applicable ozone season limitation, which did not occur in 2019.

The NO<sub>x</sub> RACT annual certification was submitted on March 27, 2020, as required.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-BS-Unit 1 and FSC-BS-Unit 2

**Permit Term (Describe requirements and cross-reference)**

**Control of CO Emissions**

Best Available Control Technology (BACT) for Carbon Monoxide (CO).



Emissions of CO shall not exceed 0.2 pounds per million Btu (lb/MMBtu) (3-hour average). This limit shall be achieved by the application of good combustion practices. Compliance with this standard will be determined by the average of 3 valid stack test runs using methods approved by the Department. [Reference: CPCN Case No. 9075, Section V Condition 17a.]

The Permittee shall perform quality control/quality assurance procedures on the CO continuous emission monitoring system. [Reference: CPCN Case 9075-Section VIII, Condition 22, 23, 24]

The Permittee shall operate the boilers in accordance the Operations and Maintenance Plan (the Plan). The Plan shall include a description of good combustion practices and methods to be employed to minimize CO emissions and methods used to estimate emissions of CO and SAM emissions.

In accordance with the Operations and Maintenance Plan, the Permittee shall continuously monitor .CO emissions using a continuous emissions monitor. The Permittee shall perform QC/QA procedures on the CEM system in accordance with facility specific practices and/or those recommended by the CEM manufacturer. [Reference: COMAR 26.11.03.06C and CPCN Case No. 9075 - June 4, 2007, Section V Condition (17)(c)]

The Permittee shall maintain a record of the CO CEM readings collected by the data acquisition system. The Permittee shall maintain all records necessary to demonstrate compliance with the Operations and Maintenance Plan, including date of occurrence and duration of any startup, shutdown and malfunctions. [Reference: COMAR 26.11.03.06C and CPCN Case No. 9075, Section V Condition 17 & Section X Condition 29.]

The Permittee shall submit a report to MDE-ARMA to be postmarked by the 30<sup>th</sup> day following the end of each calendar quarter that

- a) Summarizes separately the date, time, and duration of each startup, shutdown, or malfunction that occurred at Brandon Shores Units 1 and 2 and associated pollution control equipment during the prior period for the purposes of complying with BACT and LAER. The report shall include total monthly and consecutive 12-month total hours of startup, shutdown, and malfunction for each unit;
- b) Summarizes the monthly and consecutive rolling 12-month total emissions of PM, PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOCs, and SAM separately for each boiler, the material handling operations, and for total emissions of those pollutants from the Brandon Shores facility. [Reference: CPCN Case No. 9075, Section X. Condition 30]

If additional tests are requested, the Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to test and a notice of intent to test at least 10 days prior to the scheduled test date. The Permittee shall submit the results of stack tests in a final report within 45 days from test completion. Analytical data shall be submitted to MDE-ARMA directly from the emission testing company. [Reference: COMAR 26.11.01.04A]

The Permittee shall report to the Department within 30 days after the end of each calendar quarter, any 3-hour block average estimated CO emission values calculated by the DAS in accordance with the O&M Plan that were greater than 0.2 pounds per mm Btu while the unit was burning primary fuel. [Reference; COMAR 26.11.03.06C]

**Compliance Methods for the Above (Description and Citation):**

The Brandon Shores Units are continuously operated in accordance with an Operation and Maintenance Plan to minimize CO Emissions. CO emissions were tested on Brandon Shores Unit 1 in April 2010, and on Unit 2 in July 2010 using EPA Method 10 and were found to be below 0.2 lb/MMBtu for the average of three valid stack test runs. Quarterly reports were submitted as required that detail the required information listed above.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-BS-Unit 1 and FSC-BS-Unit 2

**Permit Term (Describe requirements and cross-reference)**

**Control of VOC Emissions**

Lowest Achievable Emission Rate (LAER) for Volatile Organic Compound (VOC)

Emissions of VOC shall not exceed 0.0024 lb/MMBtu per unit (3-hour average). Compliance with this standard will be determined by the average of 3 valid stack test runs using methods approved by the Department. [Reference: CPCN Case No. 9075, Section VI Condition 19a.]

The Permittee shall perform quality control/quality assurance procedures on the CO continuous emission monitoring system that is used in conjunction with a data acquisition system in order to continuously monitor VOC emissions. [Reference: CPCN Case No. 9075-Section VIII, condition 22, 23, and 24]

The Permittee shall operate the boilers in accordance the Operations and Maintenance Plan (the Plan). The Plan shall include a description of good combustion practices and methods to be employed to minimize VOC emissions and methods used to estimate emissions VOC emissions during startup, shutdown, and malfunction of the generating units or associated pollution control systems.

In accordance with the Operations and Maintenance Plan, the Permittee shall continuously monitor estimated VOC emissions by using a data acquisition system to collect data from the CO CEM and apply a factor of 0.012 VOC/CO in order to calculate VOC emissions for recordkeeping and reporting purposes. [Reference: COMAR 26.11.03.06C and CPCN Case No. 9075 - Section VI Condition (19)(b)]

The Permittee shall maintain a record of the data collected by the data acquisition system which calculates VOC emissions on a continuous basis. The Permittee shall maintain all records necessary to demonstrate compliance with the Operations and Maintenance Plan, including date of occurrence and duration of a startup, shutdown and malfunctions in the operation of Brandon Shores Units 1 and 2 and associated emissions control equipment. [Reference: COMAR 26.11.03.06C and CPCN Case No. 9075, Section VI condition 19 & Section X Condition 29.]

The Permittee shall report to the Department within 30 days after the end of each calendar quarter, any 3-hour block average estimated VOC emission values calculated by the DAS in accordance with the O&M Plan that were greater than 0.0024 pounds per MMBtu while the unit was burning primary fuel. [Reference: COMAR 26.11.03.06C and CPCN Case No. 9075, Section X, Condition 30]

**Compliance Methods for the Above (Description and Citation):**

The Brandon Shores Units are continuously operated in accordance with an Operation and Maintenance Plan to Minimize VOC Emissions. VOC emissions were tested on Brandon Shores Unit 1 in April 2010, and on Unit 2 in July 2010 using EPA Method 25A and results were below 0.0024 lb/MMBtu on both units. All 3-hour block average estimated VOC emissions values greater than 0.0024 lb/mmBtu were reported in the quarterly continuous emissions monitoring reports as required.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-BS-Unit 1 and FSC-BS-Unit 2

**Permit Term (Describe requirements and cross-reference)**

**MACT Subpart UUUUU**

The Permittee shall comply with 40 CFR Part 63 Subpart UUUUU (National Emission Standards for Hazardous Air Pollutants: Coal and Oil-Fired Electric Utility Steam Generating Units) applicable limits.

40 CFR Part 63 Subpart UUUUU §63.9991

- (a) You must meet the requirements in paragraphs (a)(1) and (2) of this section. You must meet these requirements at all times.
- (1) You must meet each emission limit and work practices standard in Table 1 through 3 to this subpart that applies to your EGU, for each EGU at your source, except as provided under §§63.10009/
- (2) You must meet each operating limit in Table 4 to this subpart that applies to your EGU.
- (b) As provided in §63.6 (g), the Administrator may approve use of an alternative to the work practice standards in this section.
- (c) You may use the alternate SO<sub>2</sub> limit in Tables 1 and 2 to this subpart only if your EGU:
- (1) Has a system using wet or dry flue gas desulfurization technology and SO<sub>2</sub> continuous emissions monitoring system (CEMS) installed on the EGU; and
- (2) At all times, you operate the wet or dry flue gas desulfurization technology and the SO<sub>2</sub> CEMS installed on the EGU consistent with §63.10000(b).

Table 2 – Emission Limits for Existing EGUs

If your EGU is in this subcategory	For the following pollutants	You must meet the following emission limits and work practice standards	Using these requirements as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in Table 5
Coal-fired unit not low rank virgin coal	a. Filterable particulate matter (PM)	3.0E-2 lb/MMBtu or 3.0E-1 lb/MWh	Collect a minimum of 1 dscm per run. Note: PM CEMs will be sued for FSC-BS-Units 1 & 2
	b. Hydrogen chloride (HCl)	2.0E-3 lb/MMBtu or 2.0E-2 lb/MWh	For Method 26A, collect a minimum of 0.75 dscm per run; for Method 26 collect a minimum of 120 liters per run.
			For ASTM D6348-03 or Method 320, sample for a minimum of 1 hour.
	c. Mercury (Hg)	1.2E0 lb/TBtu or 1.3E-2 lb/GWh	Hg CEMS

The Permittee shall comply with the general compliance requirements found in §63.10000 and §63.10009.

The Permittee shall comply with the testing requirements found in §63.10005, §63.10006, and §63.10007.

The Permittee shall comply with the monitoring requirements found in §63.10010, §63.10011, §63.10020, and §63.10021.

The Permittee shall comply with the record keeping requirements found in §63.10032 and §63.10033.

The Permittee shall comply with the reporting requirements found in §63.10030 and §63.10031.

**Compliance Methods for the Above (Description and Citation):**

The Brandon Shores Generating Station operates and maintains MATS compliance in accordance with 40 CFR Part 63, Subpart UUUUU. Quarterly reports detailing MATS compliance data were submitted to the Department following the end of each calendar quarter. Semi-annual MATS compliance reports were also submitted to the Department on July 30, 2019 and January 27, 2020.

Status (Check one):  Intermittent Compliance  Continuous Compliance

Emissions Unit ID(s): FSC-BS-AuxBlr 1 and FSC-BS-AuxBlr 2

Permit Term (Describe requirements and cross-reference)

**Visible Emissions Limitation**

COMAR 26.11.09.05A(2) - Visible Emissions.

In Areas III, and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

Exceptions.

Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, start-up, or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

The Permittee shall verify that there are no visible emissions when burning No. 2 fuel oil. An observer shall perform an EPA Reference Method 9 observation of stack emissions for 18-minute period once every 168 hours of operation on oil or at a minimum once per year. This requirement is waived if the total hours of operation of a boiler are less than a 100 hours in any calendar year.

The Permittee shall perform the following, if emissions are visible to human observer:

- (a) inspect combustion control system and combustion turbine operations,
- (b) perform all necessary adjustments and/or repairs to the boilers within 48 hours of operation so that visible emissions are eliminated; and,
- (c) document in writing the results of inspections, adjustments and/or repairs to the boiler.

The Permittee shall after 48 hours of operation, if the required adjustments and/or repairs had not eliminated the visible emissions, perform another Method 9 observation once daily when the boiler is operating on No.2 fuel oil for 18 minutes until corrective action have eliminated visible emissions. [Reference: COMAR 26.11.03.06C]

The Permittee shall maintain records of the results of visual emissions observations for a period of at least 5 years. [Reference: COMAR 26.11.03.06C]

The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, Report of Excess Emissions and Deviations. [Reference: COMAR 26.11.03.06C]

**Compliance Methods for the Above (Description and Citation):**

Auxiliary Boiler No. 1 ran for 102.2 hours in 2019, and Auxiliary Boiler No. 2 is retired in place and did not run in 2019. A Method 9 observation was performed on Auxiliary Boiler No. 1 and is available to the Department, if requested.

Status (Check one):  Intermittent Compliance  Continuous Compliance



**Emissions Unit ID(s):** FSC-BS-AuxBlr 1 and FSC-BS-AuxBlr 2

**Permit Term (Describe requirements and cross-reference)**

**Control of Sulfur Dioxide emissions**

COMAR 26.11.09.07A(2) - Control of Sulfur Oxides from fuel burning equipment. A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV:

- (a) All solid fuels, 1.0 percent;
- (b) Distillate fuel oil, 0.3 percent;
- (c) Residual fuel oil, 1.0 percent.

The Permittee shall obtain fuel supplier certifications which verify that the fuel oil is in compliance with the sulfur content in the fuel limitation or obtain sulfur in fuel analyses of oil that is representative of the oil burned. [Reference: COMAR 26.11.03.06C]

The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with the sulfur content in the fuel limitation or the sulfur in fuel analyses must be maintained for at least 5 years. [Reference: COMAR 26.11.03.06C]

The Permittee shall submit fuel certification report or fuel analyses if requested by MDE. [Reference: COMAR 26.11.03.06C]

**Compliance Methods for the Above (Description and Citation):**

The facility retains on site and electronically in a central location records certifying the sulfur content for each delivery of fuel oil or copies of representative sulfur in fuel analyses and makes such records available to the Department upon request. Average sulfur in fuel percentage per fuel sulfur analyses for 2019 was 0.002% and maximum sulfur in fuel percentage was 0.013%.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-BS-AuxBlr 1 and FSC-BS-AuxBlr 2

**Permit Term (Describe requirements and cross-reference)**

**Control of NO<sub>x</sub> emissions**

COMAR 26.11.09.05G - Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 percent or less (and do not meet the emission standards in §B(1)(c) of this Regulation).

(1) A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

- (a) Provide certification of the capacity factor of the equipment to the Department in writing;
- (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
- (c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;
- (d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
- (e) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.

The Permittee shall perform a combustion analysis and optimize combustion at least once annually when the hours of operation exceed 500 during the year.

The Permittee shall calculate the capacity factor of the combustion turbine for each calendar year within 30 days after the end of each year. [Reference: COMAR 26.11.03.06C]

The Permittee shall maintain:

- (1) Records of the calculated capacity factors. [Reference: COMAR 26.11.03.06C]
- (2) Records of hour of operation. [Reference: COMAR 26.11.02.19C(1)(b)]
- (3) Records of combustion analysis performed if the hours of operation exceed 500. [Reference: COMAR 26.11.09.08G(1)(c)]
- (4) Record of training program attendance for each operator. [Reference: COMAR 26.11.09.08G(1)(e)]

The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report. [Reference: COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C]

The Permittee shall submit a record of training program attendance for each operator to the Department upon request. [Reference: COMAR 26.11.09.08G(1)(e)]

**Compliance Methods for the Above (Description and Citation):**

Auxiliary Boiler No. 1 ran for 102.2 hours in 2019, with a heat input based capacity factor of 0.002%. Auxiliary Boiler No. 2 did not run in 2019 for a capacity factor of 0.0%. Facility operators were trained on combustion optimization on June 20, 2019 and training records are maintained at the facility and electronically at a central location and are available for review by the Department upon request.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-BS-AuxBlr 1 and FSC-BS-AuxBlr 2

**Permit Term (Describe requirements and cross-reference)**

**Control of HAPs emissions**

The Permittee shall comply with 40 CFR Part 63 Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters) applicable limits.

40 CFR Part 63 Subpart DDDDD §63.7500

- (a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.
- (c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in §63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.

Note: In order to meet the definition of a "Limited-use boiler" under 40 CFR Part 63, Subpart DDDDD, the Permittee shall limit the annual capacity factor, as defined in §63.7575 to no more than 10 percent.

The Permittee shall comply with the testing requirements found in §63.7510 and §63.7515.

The Permittee shall comply with the monitoring requirements found in §63.7540.

The Permittee shall comply with the record keeping requirements found in §63.7555 and §63.7560.

The Permittee shall comply with the reporting requirements found in §63.7545 and §63.7550.

**Compliance Methods for the Above (Description and Citation):**

Auxiliary Boiler No. 1 ran for 102.2 hours in 2019, with a heat input based capacity factor of 0.002%. Auxiliary Boiler No. 2 did not run in 2019 for a capacity factor of 0.0%. A tune-up of Auxiliary Boiler No. 1 was completed on August 17, 2016 and the resulting inspection and tuning report was submitted to MDE on October 13, 2016. Auxiliary Boiler No. 2 has not run since the initial Boiler MACT date. The required tune-up will be completed within 30 days of its next run time.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-BS-MH Solid Fossil Fuel (Coal) & Fly Ash Handling Operation

**Permit Term (Describe requirements and cross-reference)**

Visible Emissions Limitation

COMAR 26.11.06.02C - Visible Emission Standards.

In Areas III and IV a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.

COMAR 26.11.06.02A(2)

The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications or adjustments, or occasional cleaning of control equipment, if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.

Note: The VE limit applies only to confined sources which include coal and fly ash storage silos.

The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMP) Plan that will be used to prevent particulate matter from becoming airborne.

The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the limestone and gypsum handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material. [Reference: COMAR 26.11.03.06C]

The Permittee shall keep the results of the monthly inspections for a period of five (5) years.

The Permittee shall maintain the written reasonable precautions (BMP) at the facility and make it available to the Department upon request. [Reference: COMAR 26.11.03.06C]

The Permittee shall report the results of the inspections and/or testing and provide a copy of the current BMP plan upon request by the Department.

**Control of Particulate Matter**

COMAR 26.11.06.03(B) – Particulate Matter from Confined Sources.

(2) Areas III and IV. (a) A person may not cause or permit to be discharged into the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD (68.7 mg/dscm).

COMAR 26.11.06.03C(1) – Particulate Matter from Unconfined Sources.

A person may not cause or permit emissions from an unconfined source without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, when appropriate as determined by the Department, the installation and use of hoods, fans, and dust collectors to enclose, capture, and

vent emissions. In making this determination, the Department shall consider technological feasibility, practicality, economic impact, and the environmental consequences of the decision.

COMAR 26.11.06.03(D) – Particulate Matter from Materials Handling and Construction.

A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMPs) that will be used to prevent particulate matter from becoming airborne.

The Permittee shall update Brandon Shores Best Management Practices (BMP) Plan, as required by the initial Part 70 permit for this facility when a revision is needed to ensure that reasonable precautions will be used to prevent particulate matter from this equipment from becoming airborne and that adequate inspection will be conducted and documented. The BMP shall include provisions for routine inspections of emission sources and controls, corrective measures, and recordkeeping for such.

The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the ash handling and solid fossil fuel handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material. [Reference: COMAR 26.11.03.06C]

The Permittee shall keep the results of the monthly inspections for a period of five (5) years. [Reference: COMAR 26.11.03.06C]

The Permittee shall maintain the written BMP at the facility and make it available to the Department upon request. [Reference: COMAR 26.11.03.06C]

The Permittee shall report the results of the inspections and/or testing and provide a copy of the current BMP plan upon request by the Department. [Reference: COMAR 26.11.03.06C]

40 CFR Part 60, Subpart Y – Standards of Performance for Coal Preparation and Processing Plants

§60.254 - Standards for coal processing and conveying equipment, coal storage systems, transfer and loading systems, and open storage piles.

- (b) An owner or operator of any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified after April 28, 2008, must meet the requirements in paragraphs (b)(1) through (3) of this section, as applicable to the affected facility.
- (1) Except as provided in paragraph (b)(3) of this section, the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit 10 percent opacity or greater.
  - (2) The owner or operator must not cause to be discharged into the atmosphere from any mechanical vent on an affected facility gases which contain particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf).
  - (3) Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of paragraph (b)(1) of this section.

Note: this limit only applies to the four (4) new coal conveyors that transport coal to and from the new additive mixing facility.



§60.255- Performance tests and other compliance requirements

- (c) If any affected coal processing and conveying equipment (e.g., breakers, crushers, screens, conveying systems), coal storage systems, or coal transfer and loading systems that commenced construction, reconstruction, or modification after April 28, 2008, are enclosed in a building, and emissions from the building do not exceed any of the standards in §60.254 that apply to the affected facility, then the facility shall be deemed to be in compliance with such standards.

§60.258- Recordkeeping

- (a) The owner or operator of a coal preparation and processing plant that commenced construction, reconstruction, or modification after April 28, 2008, shall maintain in a logbook (written or electronic) on-site and make it available upon request. The logbook shall record the following:
  - (1) The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from the manufacturer recommendation, if any shall be noted.
  - (2) The date and time of periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted.
  - (3) The amount and type of coal processed each calendar month.
  - (4) The amount of chemical stabilizer or water purchased for use in the coal preparation and processing plant.
  - (5) Monthly certification that the dust suppressant systems were operational when any coal was processed and that the manufacturer's recommendations were followed for all control systems. Any variance from the manufacturer's recommendations, if any, shall be noted.
  - (6) Monthly certification that the fugitive coal dust emissions control plan was implemented as described. Any variance from the plan, if any shall be noted. A copy of the applicable fugitive coal dust emissions control plan and any letters from the Administrator providing approval of any alternative control measures shall be maintained with the logbook. Any actions, e.g., objections to the plan and any actions relative to the alternative control measures, e.g., approvals, shall be noted in the logbook as well.

§60.258- Reporting

- (b) For the purpose of reports required under section 60.7(c), any owner operator subject to the provisions of this subpart also shall report semiannually periods of excess emissions as follow:
  - (3) All 6-minute average opacities that exceed the applicable standard.
- (d) After July 1, 2011, within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with this subpart, the owner or operator of the affected facility must submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE database or must be mailed to the United States Environmental Protection Agency.

**Compliance Methods for the Above (Description and Citation):**

Construction and material handling activities at the facility were conducted in accordance with industry and site-specific best management practices to prevent particulate matter from becoming airborne. Monthly inspections are performed and records are retained on site for at least five (5) years. Written copies of the material handling BMP are maintained on site and electronically at a central location and are available for review upon request.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-BS-MH Limestone and Gypsum Handling Operation

**Permit Term (Describe requirements and cross-reference)**

**Control of Particulate Matter**

COMAR 26.11.06.03C Particulate Matter from Unconfined Sources.

A person may not cause or permit emissions from an unconfined source without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, when appropriate as determined by the Department, the installation and use of hoods, fans, and dust collectors to enclose, capture, and vent emissions. In making this determination, the Department shall consider technological feasibility, practicality, economic impact, and the environmental consequences of the decision.

COMAR 26.11.06.03D Particulate Matter from Materials Handling and Construction.

A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

Subpart 000 - Standards of Performance for Nonmetallic Mineral Processing Plants §60.672(b) Standard for particulate matter (PM). For Brandon Shores Limestone Material Handling only.

Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.

For:	The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility (as defined in §§60.670 and 60.671)	The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used	The owner or operator must demonstrate compliance with these limits by conducting
Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	10 percent opacity	15 percent opacity	An initial performance test according to §60.11 of this part and §60.675 of this subpart.

(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with emission limits in paragraphs (a) and (b) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

- (1) Fugitive emissions from the building openings (except for vents as defined in §60.671) must not exceed 7 percent opacity; and

(2) Vents (as defined in §60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of this subpart.

#### TABLE 2 TO SUBPART 000 - STACK EMISSION LIMITS FOR AFFECTED FACILITIES WITH CAPTURE SYSTEMS

For affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008. The owner or operator must meet a PM limit of 0.05 g/dscm (0.022 gr/dscf) and must meet an opacity limit of 7 percent for dry control devices. The owner or operator must demonstrate compliance with these limits by conducting an initial performance test according to §60.8 of this part and §60.675 of this subpart.

#### §60.675 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendices A-1 through A-7 of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMPs) that will be used to prevent particulate matter from becoming airborne.

The Permittee shall update Brandon Shores Best Management Practices (BMP) Plan, as required by the initial Part 70 permit for this facility when a revision is needed to ensure that reasonable precautions will be used to prevent particulate matter from this equipment from becoming airborne and that adequate inspection will be conducted and documented. The BMP shall include provisions for routine inspections of emission sources and controls, corrective measures, and recordkeeping for such.

The Permittee shall perform a monthly inspection of the operation to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the limestone and gypsum handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material. [Reference: COMAR 26.11.03.06C].

#### §60.674(b) Monitoring of Operations. For Brandon Shores Limestone Material Handling only.

(b) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b).

(1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:

(i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and §60.676(b), and



- (ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under §60.11 of this part and §60.675 of this subpart.
- (2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under §60.676(b) must specify the control mechanism being used instead of the water sprays."

The Permittee shall keep the results of the monthly inspections for a period of five (5) years.

The Permittee shall maintain the written reasonable precautions (BMPs) at the facility and make it available to the Department upon request. [Reference: COMAR 26.11.03.06C & CPCN Case No. 9075 - June 4, 2007, Section VII]

§60.676 Record Keeping. For Brandon Shores Limestone Material Handling only.

- (b) (1) Owners or operators of affected facilities (as defined in §§60.670 and 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under §60.6744(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request."

The Permittee shall report the results of the inspections and provide a copy of the current BMP plan upon request by the Department. [Reference: COMAR 26.11.03.06C & CPCN Case No. 9075 - June 4, 2007]

§60.674 Reporting. For Brandon Shores Limestone Material Handling only.

- (f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A-4) to demonstrate compliance with §60.672(b), (e) and (f). [Reference: Case No. 9075, Section X, Condition 35]

**Compliance Methods for the Above (Description and Citation):**

The facility maintains a plan that identifies the best management practices (BMPs) to prevent particulate matter from becoming airborne. This plan was reviewed and updated in May 2016 and is maintained at the facility and electronically at a central location. Monthly inspections are performed during times of material transfer to ensure BMPs are being implemented. Monthly visual emission observations at fugitive points of ash, solid fossil fuel, limestone, and gypsum material handling equipment are performed to determine whether particulate matter is becoming airborne, if extra precautions are needed, and that limits are met. Subpart OOO initial performance testing for PM and opacity was completed in 2010. The facility maintains the results of monthly inspections and visual observations for a period of five (5) years. All plans and inspection records are available to the Department upon request.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** Two (2) 500-HP Quench Pump Diesel-Fired IC Engines

**Permit Term (Describe requirements and cross-reference)**

**Visible Emissions Limitations**

COMAR 26.11.09.05 R Stationary Internal Combustion Engine Powered Equipment.

E(2) Emissions During Idle Mode. A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity. This requirement is not applicable during Preventative Maintenance.



E(3) Emissions During Operating Mode. A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity. This requirement is not applicable during Preventative Maintenance.

E(4) Exceptions.

(a) Section E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

(b) Section E(2) does not apply to emissions resulting directly from cold engine startup and warm-up for the following maximum periods:

(i) Engines that are idled continuously when not in service: 30 minutes;

(ii) All other engines: 15 minutes.

(c) Section E(2) and E(3) does not apply while maintenance, repair, or testing is being performed by qualified mechanics.

40 CFR Part 60 Subpart IIII - Standards of Performance (NSPS) for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE).

§89.113 Smoke emission standard

(a) Exhaust opacity from compression- ignition non-road engines for which this subpart is applicable must not exceed:

(1) 20 percent during the acceleration mode;

(2) 15 percent during the lugging mode; and

(3) 50 percent during the peaks in either the acceleration or lugging modes.

The Permittee shall properly operate and maintain the engines in a matter to minimize visible emissions. [Reference: COMAR 26.11.03.06C]

The Permittee must operate and maintain the stationary CI internal combustion engine according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. [Reference: §60.4211(a)]

The Permittee shall retain records of preventative maintenance that relate to combustion performance on site for at least 5 years and make these records available to the Department upon request. [Reference: COMAR 26.11.03.06C]

The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations.

### **Control of Particulate**

NSPS Subpart IIII

§60.4205b What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new non-road CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

The Permittee must comply NSPS: 40 CFR 6- - Subpart III

### **Control of Sulfur Oxides**

COMAR 26.11.09.07A(2)(b). Sulfur Content Limitations for Fuel.

A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:

(2) In Areas III and IV:

(b) Distillate fuel oils, 0.3 percent.

§60.4207 "What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?"

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.51 O(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for non-road diesel fuel.

The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil is in compliance with the limitation on the sulfur content of the fuel oil or obtain sulfur in fuel analyses of oil that is representative of the oil burned. [Reference: COMAR 26.11.03.06C]

The Permittee shall maintain records of fuel supplier's certification or sulfur in fuel analyses and shall make records available to the Department upon request. [Reference: COMAR 26.11.09.07C]

The Permittee shall report fuel supplier certification or a copy of the sulfur in fuel analyses to the Department upon request.

### **Control of Nitrogen Oxides**

NO<sub>x</sub> RACT

COMAR 26.11.09.05G - Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 percent or less

(1) A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

(a) Provide certification of the capacity factor of the equipment to the Department in writing;

(b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;

(c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;

(d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and

(e) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.

NSPS Subpart IIII

§60.4205b What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new non-road CI engines .in

§60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

The Permittee shall perform a combustion analysis and optimize combustion at least once annually when the hours of operation exceed 500 during the year. [Reference: COMAR 26.11.09.08G(1)(b)]

The Permittee shall calculate the capacity factor of the engines for each calendar year within 30 days after the end of each year. [Reference: COMAR 26.11.03.06C]

The Permittee must operate and maintain the stationary CI internal combustion engine according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. [Reference: §60.4211(a)]

The Permittee shall maintain:

- (1) Records of the calculated capacity factors. [Reference: COMAR 26.11.03.06C]
- (2) Records of hour of operation. [Reference: COMAR 26.11.02.19C(1)(b)]
- (3) Records of combustion analysis performed if the hours of operation exceed 500. [Reference: COMAR 26.11.09.08G(1)(c)]
- (4) Record of training program attendance for each operator. [Reference: COMAR 26.11.09.08G(1)(e)]

The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report. [Reference: COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C]

The Permittee shall submit a record of training program attendance for each operator to the Department upon request. [Reference: COMAR 26.11.09.08G(1)(e)]

#### **Control of VOC**

To meet LAER for the two nominal 500-horsepower diesel-fired quench pumps, the Permittee shall install units designed so the emissions of volatile organic compound (VOCs) from each of the two units shall not exceed the Tier III limits (2008) standards in g/hp-hr. [Reference: CPCN 9075 Section VI Condition 20]

Comply with Tier III requirements

#### **Control of Carbon Monoxide (CO)**

##### **BACT Requirement**

To meet the BACT for CO from the two nominal 500-horsepower diesel-fired quench pumps, the Permittee shall install engines designed so that emissions of carbon monoxide (CO) from each of the two units shall not exceed the Tier III limits (2008) standards in grams per horsepower-hour (G-hp-hr)." [Reference: CPCN 9075 Section V condition 17c]

##### **NSPS Subpart IIII**

§60.4205b What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

- (b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new non-road CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

Comply with Tier III requirements

## Control of Hazardous Air Pollutants (HAPS)

40CFR 63 Subpart ZZZZ-National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

§63.6590(c) Stationary RICE subject to Regulations under 40 CFR 60.

An affected source that is a new or reconstructed stationary RICE located at a major source of HAP emissions and is ..., or a compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 HP must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart III for compression ignition engines ... No further requirements apply for such engines under this part.

NSPS subpart III Operational limitations

§60.4209(a) What are the monitoring requirements if I am an owner or operator of a stationary combustion engine?

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.

§60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.

§60.4211 (a) and (e) What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(e) Owners or operators may operate the stationary CI ICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing shall be limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local government standards require maintenance and testing of emergency ICE beyond 100 hours per year. Any operation other than emergency operation, and maintenance and testing, is prohibited.

The Permittee shall perform a combustion analysis and optimize combustion at least once annually when the hours of operation exceed 500 during the year. [Reference: COMAR 26.11.09.08G(1)(b)]

The Permittee shall properly operate and maintain the engines in a manner to minimize visible emissions. [Reference: COMAR 26.11.03.06C]

The Permittee must operate and maintain the stationary CI internal combustion engine according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. [Reference: §60.4211(a)]



The Permittee must operate and maintain the stationary CI internal combustion engine according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. [Reference: §60.4211(a)]

Comply with NSPS Subpart IIII requirements [Reference: §63.6590(c)]

**Compliance Methods for the Above (Description and Citation):**

The 500 HP quench pump engines have been designed to meet Tier III specifications and are operated and maintained in accordance with engine manufacturer instructions and procedures. Operating hours and capacity factor information records (based on installed hour meters) are retained on site and reported annually as part of the annual emission certification reports to MDE. In 2019, quench pump operating hours were No. 01: 30.5 hours (0.35% CF) and No. 02: 30.6 hours (0.35% CF). Fuel used in the quench pumps is certified to meet Ultra-Low Sulfur Diesel standards of 15 ppm sulfur, and fuel certifications are readily available on-site. Raven Power exclusively uses a contractor for combustion optimization activities.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-BS-EG – 670 HP diesel-fired internal combustion engine emergency generator

**Permit Term (Describe requirements and cross-reference)**

**Control of Visible Emissions**

COMAR 26.11.09.05E(2) – Emission During Idle Mode

A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity. This requirement is not applicable during Preventative Maintenance.

COMAR 26.11.09.05E(3) – Emission During Operating Mode

A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity. This requirement is not applicable during Preventative Maintenance.

COMAR 26.11.09.05E(4) – Exceptions

- (a) Section E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 minutes for the purpose of clearing exhaust system.
- (b) Section E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
  - (i) Engines that are idled continuously when not in service: 30 minutes;
  - (ii) All other engines: 15 minutes.
- (c) Section E(2) and E(3) does not apply while maintenance, repair, or testing is being performed by qualified mechanics.

The Permittee shall properly operate and maintain the engines in a manner to minimize visible emissions.

The Permittee shall retain records of preventative maintenance that relate to combustion performance on site for at least 5 years and make these records available to the Department upon request. [Reference: COMAR 26.11.03.06C]

The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations."

**Control of Sulfur Oxides Emissions**

COMAR 26.11.09.07A(2) – Control of Sulfur oxides from fuel burning equipment.

In Areas III and IV, a person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:

- (a) All solid fuels, 1.0 percent;

- (b) Distillate fuel oils, 0.3 percent;
- (c) Residual fuel oils, 1.0 percent.

The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil is in compliance with the limitation on the sulfur content of the fuel oil or obtain sulfur in fuel analyses of oil that is representative of the oil burned. [Reference: COMAR 26.11.03.06C]

The Permittee shall maintain records of fuel supplier's certification or sulfur in fuel analyses and shall make records available to the Department upon request. [Reference: COMAR 26.11.09.07C]

The Permittee shall report fuel supplier certification or a copy of the sulfur in fuel analyses to the Department upon request. [Reference: COMAR 26.11.09.07C]

### **Control of Nitrogen Oxides Emissions**

COMAR 26.11.09.08G – Requirements for Fuel -Burning Equipment with a Capacity Factor of 15 percent or less and Combustion Turbines with a Capacity Factor Greater than 15 percent.

- (1) A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:
  - (a) Provide certification of the capacity factor of the equipment to the Department in writing;
  - (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
  - (c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;
  - (d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
  - (e) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.

The Permittee shall perform a combustion analysis and optimize combustion at least once annually when the hours of operation exceed 500 during the year. [Reference: COMAR 26.11.09.08G(1)(b)]

The Permittee shall calculate the capacity factor of the engines for each calendar year within 30 days after the end of each year. [Reference: COMAR 26.11.03.06C]

The Permittee shall maintain;

- (1) Records of the calculated capacity factors [Reference: COMAR 26.11.03.06C]
- (2) Records of hours of operation. [Reference: COMAR 26.11.02.19C(1)(b)]
- (3) Records of combustion analysis performed if the hours of operation exceed 500. [Reference: COMAR 26.11.09.08G(1)(c)]
- (4) Record of training program attendance for each operator. [Reference: COMAR 26.11.09.08G(1)(e)]

The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report. [Reference: COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C]

The Permittee shall submit a record of training program attendance for each operator to the Department upon request. [Reference: COMAR 26.11.09.08G(1)(e)]

### **Control of Hazardous Air Pollutants (HAPS) Emissions**

40 CFR Part 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

§63.6640

- (f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.
- (1) There is no time limit on the use of emergency stationary RICE in emergency situations.
  - (2) You may operate your emergency stationary RICE for any combination of purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).
    - (i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, the regional transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing for emergency RICE beyond 100 hours per calendar year.
    - (iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
  - (3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

The Permittee must install a non-resettable hour meter on the emergency generator if one is not already installed.  
[Reference: §63.6625(f)]

The Permittee shall maintain for the emergency generator a log of the hours of operation (including dates and times) and reason for generator operation (i.e. maintenance or operational testing, power outage, etc.) which are recorded by a non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation and how many hours are spent on non-emergency operations. [Reference: COMAR 26.11.03.06C]

The Permittee shall report the hours of operation, and reason for generator operation (i.e. maintenance or operational testing, power outage, etc.) to the Department in the annual emission certification report due on April 1 of each year.  
[Reference: COMAR 26.11.03.06C]

**Compliance Methods for the Above (Description and Citation):**

The 670 HP emergency generator was operated and maintained in accordance with the manufacturer instructions and procedures. Operating hours and capacity factor information records are retained on site. In 2019, the emergency generator operating hours were 12.4 hours (0.06% CF). Fuel used in the emergency generator is certified to meet Ultra-Low Sulfur Diesel standards of 15 ppm sulfur, and fuel certifications are readily available on-site. Raven Power exclusively uses a contractor for combustion optimization activities.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance



**Emissions Unit ID(s):** FSC-HAW-Unit 1 and FSC-HAW-Unit 4

**Permit Term (Describe requirements and cross-reference)**

**Visible Emissions**

COMAR 26.11.09.05 - Visible Emissions.

A(2) In Areas III, and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

Exceptions.

Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, start-up, or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

The Permittee shall continuously monitor opacity of the stack gases using a continuous opacity monitor (COM) that is certified in accordance with 40 CFR Part 60, Appendix B and that meets the quality assurance criteria of COMAR 26.11.31.06 [Reference: COMAR 26.11.01.10].

All information required by this regulation to be maintained or reported to the Department shall be retained and made available for review by the Department for a minimum of 5 years from the time the report is submitted. [Reference: COMAR 26.11.01.10E]

COMAR 26.11.01.10D – Record keeping and Reporting Requirements

(1) System Downtime Reporting Requirements

- (a) The Permittee shall report all system downtime that lasts or is expected to last more than 24 hours to the Department by telephone before 10 a.m. of the first regular business day following the first day on which downtime occurs.
- (b) The COM downtime report shall include the reason, if known, for the breakdown and the estimated period of time that the COM will be down. The owner or operator of the COM shall notify the Department by telephone when the COM has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems as provided in 40 CFR Part 51 Appendix P, and is producing data. [Reference: COMAR 26.11.01.10D]

The Permittee shall submit a quarterly summary report to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:

- (i) The cause, time periods, and magnitude of all emissions which exceed the applicable emission standards as provided in COMAR 26.11.09.05A(4);
- (ii) The source downtime including the time and date of the beginning and end of each downtime period and whether the source downtime was scheduled;
- (iii) The cause of all COM downtime;
- (iv) The total operating time for the quarter, and the total time and percent of the operating time during the quarter that excess emissions occurred, and the percentage of COM downtime, during the calendar quarter;
- (v) Quarterly quality assurance activities; and



- (vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status; and
- (vii) Other information required by the Department that is determined to be necessary to evaluate the data, to ensure that compliance is achieved."

**Compliance Methods for the Above (Description and Citation):**

The H. A. Wagner Generating Station continuously monitors the opacity of stack gases using a continuous monitor certified in accordance with 40 CFR Part 60, Appendix B, and that meets the quality assurance criteria of COMAR 26.11.31.

In accordance with COMAR 26.11.01.10G, the H. A. Wagner Generating Station maintains all necessary records and quarterly summary reports are submitted no later than 30 days following each calendar quarter.

H. A. Wagner Units 1 and 4 were in intermittent compliance with the visible emissions standard of 10% opacity as a six-minute average referenced in the Part 70 Operating Permit Table IV-1, 1.1(A). However, Units 1 and 4 were in continuous compliance with the superseding visible emissions standard referenced in COMAR 26.11.09.05 A as amended\*. The facility was in continuous compliance with COMAR 26.11.31. Periods of intermittent compliance were due to startup, shutdown, malfunction, moving load and soot blowing events as reported in 2019 quarterly excess emission reports and semi-annual deviation monitoring reports.

\*Regulation .05A, E amended effective August 22, 2011

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-HAW-Unit 1 and FSC-HAW-Unit 4

**Permit Term (Describe requirements and cross-reference)**

**Control of Particulate Matter**

COMAR 26.11.09.06 B(3) – Solid Fuel Burning Equipment

A person may not cause or permit particulate matter caused by the combustion of residual fuel oil to be discharged into the atmosphere in excess of 0.030 gr/dscf @ 50% excess air.

COMAR 26.11.09.06C – Determination of Compliance (by stack test)

Compliance with the particulate matter emissions standards in this regulation shall be calculated as the average of 3 test runs using EPA Test Method 5 or other United State Environmental Protection Agency test method approved by the Department.

The Permittee, in accordance with COMAR 26.11.01.04 A(1), shall conduct annual testing using EPA Method 5 of 40 CFR Part 60, Appendix A. The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date. [Reference: COMAR 26.11.03.06 C]

40 CFR Part 64-Compliance Assurance Monitoring (CAM) requirements. The Permittee shall comply with the CAM plan requirements found on Tables IV 7a for Unit 1 and IV 7b for Unit 4.

The Permittee maintain records of the results of all particulate emission compliance stack tests. [Reference: COMAR 26.11.03.06 C]

The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to test and a notice of intent to test at least 10 days prior to the scheduled test date. The Permittee shall submit the results of stack test in a final report within 60 days from test completion. [Reference: COMAR 26.11.01.04 A]

**Compliance Methods for the Above (Description and Citation):**

Particulate matter testing was conducted on Unit 1 on January 31, 2019 with results of 0.009 gr/dscf @ 50% excess air, and on Unit 4 on July 27, 2018 with results of 0.011 gr/dscf @ 50% excess air, in accordance with COMAR

26.11.01.04A(1), using EPA Method 5 of 40 CFR 60, Appendix A. Approval from MDE to postpone the 2019 particulate matter testing on Unit 4 until the unit operates for greater than or equal to 40 hours on fuel oil after April 22, 2019 was received on April 18, 2019. Protocols for these tests were submitted to the Department at least 30 days prior to the proposed test date and results were submitted to the Department within 60 days of test completion directly by the testing contractor as required.

Raven Power maintains records of all particulate emission compliance tests in a central electronic database and in hard copy at the facility.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-HAW-Unit 1 and FSC-HAW-Unit 4

**Permit Term (Describe requirements and cross-reference)**

**Control of Sulfur Dioxide Emissions**

COMAR 26.11.09.07A(2) - Control of Sulfur Oxides from fuel burning equipment.

A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV:

- (a) All solid fuels, 1.0 percent;
- (b) Distillate fuel oil, 0.3 percent;
- (c) Residual fuel oil, 1.0 percent.

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued for this generating station.

The Permittee shall perform quality control/quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix D – Emissions Data Protocol for Gas-Fired and Oil-Fired Units. [Reference: COMAR 26.11.03.06C]

The Permittee shall perform quality control/quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. [Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C]

The Permittee shall comply with the fuel analyses requirements as found in 40 CFR Part 75 Appendix D. [Reference: COMAR 26.11.03.06C]

The Permittee shall install, certify, operate, and maintain a SO<sub>2</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B-Monitoring Provisions. [Reference: §75.10(a)(1) and Acid Rain Permit]

The Permittee shall retain, on site for at least five years, fuel oil analyses of samples collected in accordance with 40 CFR Part 75 Appendix D. [Reference: COMAR 26.11.06.03C]

The Permittee shall comply with the recordkeeping and recording requirements of 40 CFR Part 72 and 40 CFR Part 75. [Reference: See Acid Rain Permit]

The Permittee shall submit fuel oil analyses to the Department upon request. [Reference: COMAR 26.11.06.03C].

**Compliance Methods for the Above (Description and Citation):**

The facility is in compliance with the sulfur in fuel requirements and maintains all records of fuel analyses and supplier certifications for submittal to the Department upon request. Results of analyses of sulfur in fuel percentages are below.

**Analyses of Sulfur-in-Fuel Percentages for 2018**

Unit	Average Sulfur-in-Fuel Percentage	Maximum Sulfur-in-Fuel Percentage
FSC-HAW-Unit 1	0.481%	0.505%
FSC-HAW-Unit 4	0.478%	0.497%

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-HAW-Unit 1 and FSC-HAW-Unit 4

**Permit Term (Describe requirements and cross-reference)**

**Control of Nitrogen Oxide Emissions**

The Permittee shall comply with the applicable standards/limits of the NO<sub>x</sub> RACT Consent Order.

40 CFR Part 72 and Part 75 - The Permittee shall comply with the requirements of the Acid Rain Permit issued in conjunction with this Part 70 permit.

The Permittee shall comply with the testing, monitoring, recordkeeping and reporting requirements of the NO<sub>x</sub> RACT Consent Order.

The Permittee shall maintain records required by the NO<sub>x</sub> RACT Consent Order.

The Permittee shall perform quality control/quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. [Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C]

The Permittee shall install, certify, operate, and maintain a NO<sub>x</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, subpart B- Monitoring Provisions. [Reference: §75.10(a)(1) and Acid Rain Permit]

The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75. [Reference: See Acid Rain Permit]

The Permittee shall comply with the reporting requirements of the Acid Rain Permit.

**Compliance Methods for the Above (Description and Citation):**

The facility operates and maintains a certified NO<sub>x</sub> CEM approved by the Department and the EPA on each unit. NO<sub>x</sub> CEMs are certified in accordance with Part 75, Appendix A. The facility complies with the monitoring, record-keeping and reporting requirements of the NO<sub>x</sub> RACT Consent Order and the Acid Rain Permit. Quarterly reports are submitted to the Department prior to the 30<sup>th</sup> day of the month following the end of each calendar quarter. The annual NO<sub>x</sub> RACT certification was submitted on March 27, 2020 as required by the NO<sub>x</sub> RACT Plan. No incidents of daily non-compliance with the NO<sub>x</sub> RACT Plan occurred in CY 2019.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-HAW-Unit 1 and FSC-HAW-Unit 4

**Permit Term (Describe requirements and cross-reference)**

**Cross State Air Pollution Rule (CSAPR)**

The Permittee shall comply with 40 CFR Part 97 Subpart AAAAAA (TR NO<sub>x</sub> Annual Trading Program) and 40 CFR 97.406 (TR NO<sub>x</sub> Annual Trading Program requirements) applicable limits.

The Permittee shall comply with 40 CFR Part 97 Subpart BBBBB (TR NO<sub>x</sub> Ozone Season Trading Program) and 40 CFR 97.506 (TR NO<sub>x</sub> Ozone Season Trading Program requirements) applicable limits.

The Permittee shall comply with 40 CFR Part 97 Subpart CCCCC (TR SO<sub>2</sub> Group 1 Trading Program) and 40 CFR 97.606 (TR SO<sub>2</sub> Group 1 Trading Program requirements) applicable limits.

The Permittee shall comply with the monitoring, recordkeeping, and reporting requirements found in §97.406, §97.430, §97.434, for the NO<sub>x</sub> Annual Trading Program.

The Permittee shall comply with the monitoring, recordkeeping, and reporting requirements found in §97.506, §97.530, §97.533, §97.534, for the NO<sub>x</sub> Ozone Season Trading Program.

The Permittee shall comply with the monitoring, recordkeeping and reporting requirements found in §97.606, §97.630, §97.631, §97.632, §97.633, §97.634.

The Permittee operates continuous emission monitoring system (CEMS) pursuant to 40 CFR Part 75, Subpart B (for SO<sub>2</sub> monitoring) and 40 CFR Part 75, Subpart H (for NO<sub>x</sub> monitoring).

**Compliance Methods for the Above (Description and Citation):**

Raven Power maintains compliance with the Title V operating permit and CSAPR rule for the H.A. Wagner Generating Facility in accordance with 40 CFR Part 97. NO<sub>x</sub>, SO<sub>2</sub> and ozone season NO<sub>x</sub> are continuously monitored and reported as required. Raven Power holds SO<sub>2</sub>, NO<sub>x</sub>, and ozone season NO<sub>x</sub> allowances for both H.A. Wagner units in accordance with 40 CFR 97.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-HAW-Unit 2 and FSC-HAW-Unit 3

**Permit Term (Describe requirements and cross-reference)**

**Visible Emissions Limitation**

COMAR 26.11.09.05A(2) - Visible Emissions

In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

Exceptions.

Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, start-up, or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

The Permittee shall continuously monitor opacity of the stack gases using a continuous opacity monitor that is certified in accordance with 40 CFR Part 60, Appendix B and that meets the quality assurance criteria of COMAR 26.11.31.06. [Reference: COMAR 26.11.01.10]

All information required by this regulation to be maintained or reported to the Department shall be retained and made available for review by the Department for a minimum of 5 years from the time the report is submitted. [Reference: COMAR 26.11.01.10E]

The Permittee shall report all system downtime that lasts or is expected to last more than 24 hours to the Department by telephone before 10 a.m. of the first regular business day on which breakdown occurs. The COM downtime report shall include the reason, if known, for the breakdown and the estimated period of time that the COM will be down.



The owner or operator of the CEM shall notify the Department by telephone when the COM has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in 40 CFR Part 51 Appendix P, and is producing data.

**Data Reporting Requirements –**

- (a) A COM shall automatically reduce all data to six-minute block averages calculated from 24 or more equally spaced data points.
- (b) All COM data shall be reported in a format approved by the Department.
- (c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:
  - (i) The cause, time periods, and the opacity of all emissions which exceed applicable quarterly, daily and hourly emission standards as provided in COMAR 26.11.09.05A(4);
  - (ii) The source downtime including the time and date of the beginning and end of each downtime period and whether the source downtime was scheduled;
  - (iii) The cause of all COM downtime;
  - (iv) The total operating time for the quarter, and the total time and percent of the operating time during the quarter that excess emissions occurred, and the percentage of COM downtime, during the calendar quarter;
  - (v) Quarterly quality assurance activities; and
  - (vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status; and
  - (vii) Other information required by the Department determines is necessary to evaluate the data or to ensure that compliance is achieved.

**Compliance Methods for the Above (Description and Citation):**

The facility monitors the opacity of stack gases using continuous monitors certified in accordance with 40 CFR Part 60, Appendix B, and which meet the quality assurance criteria of COMAR 26.11.31.

In accordance with COMAR 26.11.01.10G, the facility maintains all necessary records and quarterly summary reports were submitted as required no later than 30 days following the end of each calendar quarter.

No system downtime of more than 24 hours occurred in 2019.

Units 2 and 3 were in intermittent compliance with the visible emissions standard of 10% opacity as a six-minute average referenced in the Part 70 Operating Permit Table IV-1, 1.1 (A). However, Units 2 and 3 were in continuous compliance with the superseding visible emissions standard referenced in COMAR 26.11.09.05 A as amended\*. The facility was in continuous compliance with COMAR 26.11.31. Periods of intermittent compliance were due to startup, shutdown, malfunction, moving load and soot blowing events as reported in 2019 quarterly excess emission reports and semi-annual deviation monitoring reports.

\*Regulation .05A, E amended effective August 22, 2011

**Status (Check one):**  Intermittent Compliance     Continuous Compliance

**Emissions Unit ID(s):** FSC-HAW-Unit 2 and FSC-HAW-Unit 3

**Permit Term (Describe requirements and cross-reference)**

**Control Of Particulate Matter**

COMAR 26.11.09.06B(3) - Solid Fuel Burning Equipment

A person may not cause or permit particulate matter caused by the combustion of solid fuel to be discharged into the atmosphere in excess 0.03 gr/scfd @ 50% excess air.

COMAR 26.11.09.06C- Determination of Compliance (by stack test)

Compliance with the particulate matter emissions standards in this regulation shall be calculated as the average of 3 test runs using EPA Test Method 5 or other United States Environmental Protection Agency test method approved by the Department.

The Permittee, in accordance with COMAR 26.11.01.04A(1), shall conduct annual testing using EPA Reference Methods of 40 CFR Part 60, Appendix A. The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to the proposed test date and provide a 10-day notice to the Department prior to the scheduled test date. [Reference: COMAR26.11.03.06C]

The Permittee shall comply with the monitoring requirements of the Compliance Assurance Monitoring Requirements.

The Permittee shall maintain records of the results of all particulate emission compliance tests. For compliance stack test required under Conditions B-IV-6 and B-IV-7 of CPCN No. 9338, Wagner shall maintain all records of stack test notifications, reports, and results for a period of at least 5 years. [Reference: COMAR 26.11.03.06C, COMAR 26.11.02.02H and CPCN No. 9338, Condition B-IV-26, 32]

The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to the proposed test date and provide 10 days notice prior to the scheduled test date. The Permittee shall submit the stack test results to the Department in a final report within 60 days from the date of the test completion. [Reference: COMAR 26.11.06.03C, COMAR 26.11.02.02H and CPCN No. 9338, Condition B-IV-26, 32].

**Compliance Methods for the Above (Description and Citation):**

Particulate matter tests were conducted using EPA Method 5 on Unit 2 on July 30, 2019 with results of 0.014 gr/dscf @ 50% excess air, and on Unit 3 on August 7, 2019 with results of 0.005 gr/dscf @ 50% excess air. Test protocols and test results were submitted to the Department as required and records of the test results are maintained on site and electronically in a central location.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-HAW-Unit 2 and FSC-HAW-Unit 3

**Permit Term (Describe requirements and cross-reference)**

**Control of Sulfur Dioxide Emissions**

COMAR 26.11.09.07A(2) Control of Sulfur Oxides from fuel burning equipment.

A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV:

- (a) All solid fuels, 1.0 percent;
- (b) Distillate fuel oils, 0.3 percent;
- (c) Residual fuel oils, 1.0 percent.

COMAR 26.11.27.03C. - SO<sub>2</sub> Emission Limitations

(1) Except as provided in §E of this regulation, annual SO<sub>2</sub> emissions from each affected electric generating unit may not exceed the number of tons in §C(2) of this regulation.

(2) Annual Tonnage Limitations.

Affected Unit	Annual SO <sub>2</sub> Tonnage Limitations Beginning
	January 1, 2013
H. A. Wagner Unit 2	1,239 tons
H. A. Wagner Unit 3	2,490 tons

COMAR 26.11.27.03E – System Wide Compliance Determinations

- (1) Compliance with the emission limitations in §§B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of a tonnage limitations for all electric generating units in that system.
- (2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§B and C of this regulation.
- (3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued in conjunction with this Part 70 permit.

The Permittee shall perform quality control/quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. [Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C].

The Permittee shall obtain fuel supplier sulfur in fuel analyses or collect and analyze coal samples of coal received that demonstrate that the coal is in compliance with the 1.0 percent sulfur content in fuel limitation on an as burned basis. [Reference: COMAR 26.11.03.06C].

A person owning or operating fuel-burning equipment burning coal with a heat input capacity of 100 million BTU per hour or greater and burning coal shall install CEMs to measure and record sulfur dioxide, nitrogen oxide, and either oxygen or carbon dioxide and flow. [Reference: COMAR 26.11.01.11B(2)]

Healthy Air Act COMAR 26.11.27.05 -Monitoring Requirements

Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.

The Permittee shall install, certify, operate, and maintain a SO<sub>2</sub> emission monitoring system that meets the requirements of 40 CFR Part 75, Subpart B-Monitoring Provisions [Reference: §75.10(a)(1) and Acid Rain Permit]

The Permittee shall retain, on site for at least five years, fuel supplier certifications stating that the coal is in compliance with the sulfur content in the fuel limitation or analyses of collected samples. [Reference: COMAR 26.11.03.06C]

The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E. [Reference: COMAR 26.11.01.11E(2)].

The Permittee shall maintain all records necessary to demonstrate compliance with the requirements of COMAR 26.11.27. [Reference: COMAR 26.11.03.06C] The Permittee shall maintain all information required to be reported or maintained under COMAR 26.11.01.11, onsite for at least 5 years, and make available to the Department upon request. [Reference: COMAR 26.11.03.06C and COMAR 26.11.01.11E(2)(d)]

The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75. [Reference: See Acid Rain Permit]

The Permittee shall submit coal supplier certifications or sulfur in fuel analyses to the Department upon request. [Reference: COMAR 26.11.11E(1) and E(2)]

Healthy Air Act COMAR 26.11.27.05 – Monitoring and Reporting Requirements

B. Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.

C. Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
- (3) A current compliance plan; and
- (4) Any other information requested by the Department.

The Permittee shall submit the following CEMS reports to the Department for all CEMS required to be operated with the boilers:

- (a) CEM System Downtime Reports – All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 am of the first regular business day following the breakdown;
- (b) Quarterly CEM Summary Reports – A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department and shall include the information required under COMAR 26.11.01.11E(2)(c)(1)-(vii). [Reference: COMAR 26.11.01.11E(1) & (2)]

The Permittee shall also comply with the reporting requirements of the renewal Acid Rain Permit. [Reference: see the Acid Rain Permit]

**Compliance Methods for the Above (Description and Citation):**

The H. A. Wagner Generating Station continuously monitored sulfur dioxide emissions in accordance with 40 CFR Part 75, subpart §75.10 A(1) and quarterly summary reports were submitted to the Department following each calendar quarter which detailed excess emissions incidents. Sulfur in fuel analyses were collected and records are maintained as required in hard copy at the facility and in a central electronic database. Compliance with the Annual SO<sub>2</sub> Tonnage Limitations was demonstrated on a system-wide basis. The 2019 HAA summary report was submitted to the Department on February 26, 2020 as required which detailed total sulfur dioxide emissions from each affected unit. All other monitoring, recordkeeping and reporting requirements were met as required. The facility does not purchase or burn coal with a sulfur in fuel percentage exceeding 1%, and makes fuel supplier analyses available to the Department upon request. The facility holds allowances as required by the Acid Rain Permit.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-HAW-Unit 2 and FSC-HAW-Unit 3

**Permit Term (Describe requirements and cross-reference)**

**Control of NO<sub>x</sub> Emissions**

NO<sub>x</sub> RACT requirements - [Reference-NO<sub>x</sub> RACT Averaging Plan Consent Decree dated February 18, 2016 and COMAR 26.11.09.08]



Requires that the Fort Smallwood Road Complex meet the following NO<sub>x</sub> RACT limits:

Table 1 – Summary of NO<sub>x</sub> RACT Averaging Plan Limits (2016)

Facility	Unit	RACT Limit, lb/MMBtu
Brandon Shores	1	0.5
	2	0.5
H.A. Wagner	1	0.3
	2	0.5
	3	0.5
	4	0.3

Individual unit compliance with NO<sub>x</sub> RACT requirements will be determined daily on a 30-day rolling average basis. Annual compliance will also be demonstrated by showing that annual mass emissions from the units in the averaging plan are less than 80% of the mass emissions that would have been allowed on an individual basis.

COMAR 26.11.27.03B(1) - (7).

(1) Except as provided in §E of this regulation, annual NO<sub>x</sub> emissions from each affected electric generating unit may not exceed the number of tons in §B(2) of this regulation.

(2) Annual Tonnage Limitations

Affected Unit	Annual NO <sub>x</sub> Tonnage Limitations Beginning
	January 1, 2012
H. A. Wagner Unit 2	555 tons
H. A. Wagner Unit 3	1,115 tons

(3) Except as provided in §E of this regulation, ozone season NO<sub>x</sub> emissions from each affected electric generating unit may not exceed the number of tons in §B(4) of this regulation.

(6) Ozone Season Tonnage Limitations.

Affected Unit	Ozone Season NO <sub>x</sub> Tonnage Limitations Beginning May 1, 2012
H. A. Wagner Unit 2	229 Tons
H. A. Wagner Unit 3	481 Tons

(7) Electric System Reliability During Ozone Seasons.

(a) An exceedance of the NO<sub>x</sub> limitations in §B(4) or (6) of this regulation which occurs because PJM Interconnection, LLC or a successor independent system operator, acts to invoke "Maximum

Emergency Generation", "Load Reduction", "Voltage Reduction", "Curtailment of Non-essential Building Load", or "Manual Load Dump" procedures in accordance with the current PJM Manual, or a PJM alert preceding such action as to a generating unit that has temporarily shut down in order to avoid potential interruption in electric service and maintain electric system reliability is not a violation of this chapter provided that:

- (i) Within 36 hours following the action, the owner or operator of the affected electric generating unit or units notifies the Manager of the Air Quality Compliance Program of the action taken by PJM Interconnection and provides the Department with documentation of the action which is satisfactory to the Department;
- (ii) Within 48 hours after completion of the action, the owner or operator of the affected unit or units provides the Department with the estimated NO<sub>x</sub> emissions in excess of the emission limitation; and
- (iii) See State-only enforceable section of the permit for additional requirement.

(b) The owner or operator of an electric generating unit or system, as applicable, shall send written notice to the Manager of the Air Quality Compliance Program not later than 5 business days following the day when the cumulative ozone season NO<sub>x</sub> emissions of an electric generating unit or system, as applicable, are:

- (i) Equal to approximately 80 percent of the applicable ozone season emission limitation; and
- (ii) Equal to the applicable ozone season emission limitation.

#### COMAR 26.11.27.03E – System-Wide Compliance Determinations.

- (1) Compliance with the emission limitations in §§B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.
- (2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§B and C of this regulation.
- (3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease, or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.

The Permittee shall comply with the requirements of the Phase II Acid Rain Permit issued in conjunction with this Part 70 permit.

#### NO<sub>x</sub> RACT

All units included in the Averaging Plan have continuous emissions monitors (CEM) for monitoring NO<sub>x</sub> emissions. These units follow the operations, maintenance, recordkeeping and reporting requirements contained in 40 CFR Part 75. [Reference: Consent Agreement dated February 16, 2016]

The Permittee shall operate, calibrate, and maintain a certified NO<sub>x</sub> CEM or an alternative NO<sub>x</sub> monitoring method approved by the Department and the EPA on each installation. [Reference: COMAR 26.11.09.08C(3)]

The Permittee certify CEMs in accordance with Part 75, Appendix A. [Reference: COMAR 26.11.09.08B(2)(b)]

The Permittee shall perform quality control/quality assurance procedures on the continuous emission monitoring system as established in 40 CFR Part 75, Appendix A. [Reference: 40 CFR Part 75, Appendix A & COMAR 26.11.03.06C]

All units included in the Averaging Plan have continuous emissions monitors (CEM) for monitoring NO<sub>x</sub> emissions. These units follow the operations, maintenance, recordkeeping and reporting requirements contained in 40 CFR Part 75. [Reference: Consent Agreement dated February 18, 2016]

The Permittee shall operate, calibrate, and maintain a certified NO<sub>x</sub> CEM or an alternative NO<sub>x</sub> monitoring method approved by the Department and the EPA on each installation. [Reference: COMAR 26.11.09.08C(3)]

The Permittee shall certify CEMs in accordance with Part 75, Appendix A. [Reference: COMAR 26.11.09.08B(2)(b)]

The Permittee shall maintain records sufficient to demonstrate compliance with the requirements of the Healthy Air Act, COMAR 26.11.27. The Permittee shall maintain all information required to be reported or maintained under COMAR 26.11.01.11, on site for at least 5 years, and make available to the Department upon request. [Reference: COMAR 26.11.03.06C and COMAR 26.11.01.11E(2)(d)]

The Permittee shall comply with the recordkeeping requirements of 40 CFR Part 72 and 40 CFR Part 75. [Reference: See Acid Rain Permit]

The Permittee shall comply with the reporting requirements of the NO<sub>x</sub> RACT Consent Order

The Permittee shall also comply with the reporting requirements of the renewal Acid Rain Permit. [Reference: see the Acid Rain Permit]

**Compliance Methods for the Above (Description and Citation):**

The facility operates, calibrates, and maintains a certified NO<sub>x</sub> CEM approved by the Department and the EPA on each unit. NO<sub>x</sub> CEMs are certified in accordance with Part 75, Appendix A.

The facility maintains all necessary records in both hard copy and in a centrally located electronic database and submits quarterly reports to the Department before the 30<sup>th</sup> day of the month following the end of each calendar quarter.

Wagner Units 2 and 3 were in compliance with current annual and ozone season NO<sub>x</sub> limitations as demonstrated on a system-wide basis. The NO<sub>x</sub> RACT compliance certification was submitted to the Department on March 27, 2020 as required.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-HAW-Unit 2 and FSC-HAW-Unit 3

**Permit Term (Describe requirements and cross-reference)**

**Healthy Air Act**

COMAR 26.11.27.05B and C - Monitoring and Reporting Requirements.

Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department. The report for each calendar year shall be submitted not later than March 1 of the following year.

C. Each report shall include:

- (1) Emissions performance results related to compliance with the emission requirements under this chapter;
- (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury emitted during the previous calendar year from each affected unit;

- (3) A current compliance plan; and
- (4) Any other information requested by the Department. [Reference: Healthy Air Act - COMAR 26.11.27 B and C]

**Compliance Methods for the Above (Description and Citation):**

The Annual Healthy Air Act Report including all required information for this facility was submitted to the Department on February 26, 2020 as required.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-HAW-Unit 1, FSC-HAW-Unit 2, FSC-HAW-Unit 3, and FSC-HAW-Unit 4

**Permit Term (Describe requirements and cross-reference)**

**NO<sub>x</sub> RACT**

NO<sub>x</sub> RACT Averaging Plan Consent Order dated February 18, 2016 and COMAR 26.11.09.08 which requires that H.A. Wagner Units 1, 2, 3, and 4 meet the following NO<sub>x</sub> RACT limits:

- FSC-HAW-Unit 1- 0.3 lb/mmbtu
- FSC-HAW-Unit 2- 0.5 lb/mmbtu
- FSC-HAW-Unit 3- 0.5 lb/mmbtu
- FSC-HAW-Unit 4- 0.3 lb/mmbtu

Individual unit compliance with NO<sub>x</sub> RACT requirements will be determined daily on a 30-day rolling average basis. Annual compliance will also be demonstrated by showing that annual mass emissions from the units in the averaging plan are less than 80% of the mass emissions that would have been allowed on an individual basis.

The Permittee shall operate, calibrate, and maintain a certified NO<sub>x</sub> CEM or an alternative NO<sub>x</sub> monitoring method approved by the Department and the EPA on each installation. [Reference: COMAR 26.11.09.08C(3)].

The Permittee certify CEMs in accordance with Part 75, Appendix A [Reference: COMAR 26.11.09.08B(2)(b)]

The Permittee shall maintain at each of the Generating Units records and information adequate to verify the calculations used to demonstrate compliance with the Averaging Plan's requirements, and shall make these records and information available to the Department upon request. The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.11E. [Reference: COMAR 26.11.01.11A(2) and COMAR 26.11.01.11E, and October 24, 2012 Consent Order]

The Permittee shall submit a written report to the Department within ninety (90) days following the end of each calendar year demonstrating compliance with the Averaging Plan's requirement that aggregate annual emissions from the Generating Units be less than 80 percent of the Generating Unit's mass emissions which would have been allowed pursuant to the applicable source-specific requirements of COMAR 26.11.09.08.

The Permittee shall submit quarterly emission reports of CEM data to the Department on or before the thirtieth day of the month following the end of each calendar quarter. [Reference: COMAR 26.11.09.08K(1)]

The Permittee shall comply with the reporting requirements of COMAR 26.11.01.11E. Record Keeping and Reporting Requirements. [Reference: COMAR 26.11.01.11E]

**Compliance Methods for the Above (Description and Citation):**

The H.A. Wagner Generating Station operates, calibrates and maintains a certified NO<sub>x</sub> CEM approved by the Department and the EPA on each unit. NO<sub>x</sub> CEMs are certified in accordance with Part 75, Appendix A.

The H.A. Wagner Generating Station maintains all necessary records in both hard copy and an electronic database and submits quarterly reports of CEM data to the Department before the 30<sup>th</sup> day of the month following the end of each calendar quarter.



The NO<sub>x</sub> RACT compliance certification was provided to the Department on March 27, 2020 as required.

Status (Check one):  Intermittent Compliance  Continuous Compliance

Emissions Unit ID(s): FSC-HAW-Unit 1, FSC-HAW-Unit 2, FSC-HAW-Unit 3, and FSC-HAW-Unit 4

Permit Term (Describe requirements and cross-reference)

MACT Subpart UUUUU

The Permittee shall comply with 40 CFR Part 63 Subpart UUUUU (National Emission Standards for Hazardous Air Pollutants: Coal and Oil-Fired Electric Utility Steam Generating Units) applicable limits.

40 CFR Part 63 Subpart UUUUU §63.9991

- (d) You must meet the requirements in paragraphs (a)(1) and (2) of this section You must meet these requirements at all times.
  - (3) You must meet each emission limit and work practices standard in Table 1 through 3 to this subpart that applies to your EGU, for each EGU at your source, except as provided under §§63.10009/
  - (4) You must meet each operating limit in Table 4 to this subpart that applies to your EGU.
- (e) As provided in §63.6 (g), the Administrator may approve use of an alternative to the work practice standards in this section.
- (f) You may use the alternate SO<sub>2</sub> limit in Tables 1 and 2 to this subpart only if your EGU:
  - (3) Has a system using wet or dry flue gas desulfurization technology and SO<sub>2</sub> continuous emissions monitoring system (CEMS) installed on the EGU; and
  - (4) At all times, you operate the wet or dry flue gas desulfurization technology and the SO<sub>2</sub> CEMS installed on the EGU consistent with §63.10000(b).

Table 2 – Emission Limits for Existing EGUs

If your EGU is in this subcategory	For the following pollutants	You must meet the following emission limits and work practice standards	Using these requirements as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in Table 5
Coal-fired unit not low rank virgin coal	a. Filterable particulate matter (PM)	3.0E-2 lb/MMBtu or 3.0E-1 lb/MWh	Collect a minimum of 1 dscm per run. Note: PM CEMs will be sued for FSC-BS-Units 1 & 2
	b. Hydrogen chloride (HCl)	2.0E-3 lb/MMBtu or 2.0E-2 lb/MWh	For Method 26A, collect a minimum of 0.75 dscm per run; for Method 26 collect a minimum of 120 liters per run.
			For ASTM D6348-03 or Method 320, sample for a minimum of 1 hour.
	c. Mercury (Hg)	1.2E0 lb/TBtu or 1.3E-2 lb/GWh	Hg CEMS

The Permittee shall comply with the general compliance requirements found in §63.10000 and §63.10009.  
The Permittee shall comply with the testing requirements found in §63.10005, §63.10006, and §63.10007.  
The Permittee shall comply with the monitoring requirements found in §63.10010, §63.10011, §63.10020, and §63.10021.  
The Permittee shall comply with the record keeping requirements found in §63.10032 and §63.10033.  
The Permittee shall comply with the reporting requirements found in §63.10030 and §63.10031.

**Compliance Methods for the Above (Description and Citation):**

The H. A. Wagner Generating Station operates and maintains MATS compliance in accordance with 40 CFR Part 63, Subpart UUUUU for Units 2, 3, and 4. H. A. Wagner Unit 1 is considered a natural gas unit and is not subject to the requirements. Quarterly reports detailing MATS compliance data were submitted to the Department following the end of each calendar quarter. Semi-annual MATS compliance reports were also submitted to the Department on July 30, 2019 and January 27, 2020.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** FSC-HAW-CT

**Permit Term (Describe requirements and cross-reference)**

**Visible Emissions Limitation**

COMAR 26.11.09.05A(2) - Visible Emissions.

In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

COMAR 26.11.09.05A(3) - Exceptions

Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

**Control of Sulfur Dioxide emissions**

COMAR 26.11.09.07A(2) - Control of Sulfur Oxides from fuel burning equipment.

A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV:

- (a) All solid fuels, 1.0 percent;
- (b) Distillate fuel oil, 0.3 percent;
- (c) Residual fuel oil, 1.0 percent.

**Control of NO<sub>x</sub> emissions**

COMAR 26.11.09.05G - Requirements of Fuel-Burning Equipment with a Capacity Factor of 15 percent or less and Combustion Turbines with a capacity factor greater than 15%

(1) "A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

- (a) Provide certification of the capacity factor of the equipment to the Department in writing;

- (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
- (c) Maintain the results of the combustion analysis and any stack tests at the site for at least 2 years and make these results available to the Department and the EPA upon request;

The Permittee shall perform a combustion analysis and optimize combustion at least once annually when the hours of operation exceed 500 during the year. [Reference: COMAR 26.11.09.08G(1)(b)]

The Permittee shall verify that there are no visible emissions when burning No. 2 fuel oil. An observer shall perform an EPA Reference Method 9 observation of stack emissions for 18-minute period once every 168 hours of operation on oil or at a minimum once per year.

The Permittee shall perform the following, if emissions are visible to human observer:

- (a) inspect combustion control system and combustion turbine operations,
- (b) perform all necessary adjustments and/or repairs to the boilers within 48 hours of operation so that visible emissions are eliminated; and
- (c) document in writing the results of inspections, adjustments and/or repairs to the boiler.

The Permittee shall after 48 hours of operation, if the required adjustments and/or repairs had not eliminated the visible emissions, perform another Method 9 observation once daily when the boiler is operating on No.2 fuel oil for 18 minutes until corrective action have eliminated visible emissions. [Reference: COMAR 26.11.03.06C]

The Permittee shall obtain fuel supplier certifications stating that the fuel oil is in compliance with the sulfur content in the fuel limitation or obtain sulfur in fuel analyses of oil that is representative of the oil burned. [Reference: COMAR 26.11.03.06C]

The Permittee shall calculate the capacity factor of the combustion turbine for each calendar year within 30 days after the end of each year. [Reference: COMAR 26.11.03.06C]

The Permittee shall maintain records of the results of visual emissions observations for a period of at least 5 years. [Reference: COMAR 26.11.03.06C]

The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with the sulfur content in the fuel limitation or the sulfur in fuel analyses for at least 5 years. [Reference: COMAR 26.11.03.06C]

The Permittee shall maintain:

- (1) Records of the calculated capacity factors. [Reference: COMAR 26.11.03.06C]
- (2) Records of hour of operation. [Reference: COMAR 26.11.02.19C(1)(b)]
- (3) Records of combustion analysis performed if the hours of operation exceed 500. [Reference: COMAR 26.11.09.08G(1)(c)]

The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations." [Reference: COMAR 26.11.03.06C]

The Permittee shall submit fuel certification report or fuel analyses if requested by MDE. [Reference: COMAR 26.11.03.06C]

The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report. [Reference: COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C]

#### **Compliance Methods for the Above (Description and Citation):**

The H.A. Wagner Generating Facility maintains records of fuel supplier certifications or conducts fuel analyses as required. Average sulfur in fuel percentage by analysis for 2019 was 0.032%, with a maximum sulfur in fuel of 0.048%. Unit capacity factor is calculated as required. Records of visible emissions tests are maintained in hard copy at the plant and in an electronic database at a central location readily accessible. FSC-HAW-CT operated 13.3 hours in 2019, so no tune-up was required.

Capacity factor of the Combustion Turbine was 0.11% in 2019. Method 9 testing was performed as required on May 10, 2019.

Status (Check one):  Intermittent Compliance  Continuous Compliance

Emissions Unit ID(s): FSC-HAW-MH: Fugitive Ash and Solid Fossil Fuel Handling Operation for Wagner Station

Permit Term (Describe requirements and cross-reference)

**Control of Particulate Matter**

COMAR 26.11.06.03B – Particulate Matter from Confined Sources.

“A person may not cause or permit to be discharged into the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD (68.7 mg/dscm).”

The Permittee shall design the DSI sorbent storage silo bin vent filters to achieve a controlled emission rate of no more than 0.03 gr/SCFD. [Reference: COMAR 26.11.02.02H]

COMAR 26.11.06.03D - Particulate Matter from Materials Handling and Construction.

"A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, but not be limited to, the following when appropriate as determined by the control officer:

- (1) Use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land.
- (2) Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts.
- (3) Installation and use of hoods, fans, and dust collectors to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting of buildings or other similar operations.
- (4) Covering, at all times when in motion, open-bodied vehicles transporting materials likely to create air pollution. Alternate means may be employed to achieve the same results as would covering the vehicles.
- (5) The paving of roadways and their maintenance in clean condition.
- (6) The prompt removal from paved streets of earth or other material which has been transported there by trucks or earth moving equipment or erosion by water."

NSPS 40 CFR Part 60, Subpart Y – Standards of Performance for Coal Preparation and Processing Plants

§60.254 – Standards for coal processing and conveying equipment, coal storage systems, transfer and loading systems, and open storage piles.

- (b) The owner or operator of any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified after April 28, 2008, must meet the requirements in paragraphs (b)(1) through (3) of this section, as applicable to the affected facility.
- (1) Except as provided in paragraph (b)(3) of this section, the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit 10 percent opacity or greater.
  - (2) The owner or operator must not cause to be discharged into the atmosphere from any mechanical vent on an affected facility gases which contain particulate matter in excess of 0.023 g/dscm (0.01 gr/dscf).
  - (3) Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of paragraph (b)(1) of this section.



Note: The limits in this section only apply to the four (4) new coal conveyors that transport coal to and from the new additive mixing facility.

NSPS §60.255 – Performance tests and other compliance requirements.

(b) An owner or operator of each affected facility that commenced construction, reconstruction, or modification after April 28, 2008, must conduct performance tests according to the requirements of §60.8 and the methods identified in §60.257 to demonstrate compliance with the applicable emissions standards in this subpart as specified in paragraphs 9b)(1) and (2) of this section.

(2) For each affected facility subject to an opacity standard, an initial performance test must be performed. Thereafter, a new performance test must be conducted according to the requirements in paragraphs (b)(2)(i) through (iii) of this section, as applicable, except as provided for in paragraphs (e) and (f) of this section. Performance test and other compliance requirements for coal truck dump operations are specified in paragraph (h) of this section.

(i) If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test must be conducted within 90 operating days of the date that the previous performance test was required to be complete.

(ii) If all 6-minute average opacity readings in the most recent performance test are equal to or less than half the applicable opacity limit, a new performance test must be conducted within 12 calendar months of the date that the previous performance test was required to be completed.

(iii) An owner or operator of an affected facility continuously monitoring scrubber parameters as specified in §60.256(b)(2) is exempt from the requirements in paragraphs (b)(2)(i) and (ii) if opacity performance tests are conducted concurrently with (or within a 60-minute period of) PM performance test.

(c) If any affected coal processing and conveying equipment (e.g., breakers, crushers, screens, conveying systems), coal storage systems, or coal transfer and loading systems that commenced construction, reconstruction, or modification after April 28, 2008, are enclosed in a building, and emissions from the building do not exceed any of the standards in §60.254 that apply to the affected facility, then the facility shall be deemed to be in compliance with such standards.

The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions or best management practices (BMPs) that will be used to prevent particulate matter from becoming airborne.

The Permittee shall update the Best Management Practices (BMP) Plan, as required by the initial Part 70 permit for this facility when a revision is needed to ensure that reasonable precautions will be used to prevent particulate matter from this equipment from becoming airborne and that adequate inspection will be conducted and documented. The BMP shall include provisions for routine inspections of emission sources and controls, corrective measures, and recordkeeping for such.

The Permittee shall perform a monthly inspection of the material handling transfer points and operations to verify that the reasonable precautions (BMPs) are being implemented. During the monthly inspection, the Permittee shall perform a visual observation for a minute period of the emissions points of the ash handling and solid fossil fuel handling systems to determine whether particulate matter is becoming airborne and if additional precautions are needed. The monthly inspection shall be performed at a time that the ash handling and solid fossil fuel handling systems are transferring material. [Reference: COMAR 26.11.03.06C]

The Permittee shall keep the results of the monthly inspections for a period of five (5) years.

The Permittee shall maintain the written reasonable precautions (BMPs) at the facility. [Reference: COMAR 26.11.03.06C]

NSPS §60.258 – Reporting and Recordkeeping

- (a) The owner or operator of a coal preparation and processing plant that commenced construction, reconstruction, or modification after April 28, 2008, shall maintain a logbook (written or electronic) on-site and make it available upon request. The logbook shall record the following:
- (1) The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from manufacturer recommendation, if any, shall be noted.
  - (2) The date and time of periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along corrective actions taken to reduce visible emissions. Results from the actions shall be noted.
  - (3) The amount and type of coal processed each calendar month.
  - (4) The amount of chemical stabilizer or water purchased for use in the coal preparation and processing plant.
  - (5) Monthly certification that the dust suppressant systems were operational when any coal was processed and the manufacturer's recommendations were followed for all control systems. Any variance from the manufacturer's recommendations, if any, shall be noted.
  - (6) Monthly certification that the fugitive coal dust emissions control plan was implemented as described. Any variance from the plan, if any, shall be noted. A copy of the applicable fugitive coal dust emissions control plan and any letters from the Administrator providing approval of any alternative control measures shall be maintained with the logbook. Any actions, e.g., objections, to the plan and any actions relative to the alternative control measures, e.g., approvals, shall be noted in the logbook as well.

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The Permittee shall update the facility's existing plant that contains an explanation of the reasonable precautions or BMPs that will be used to prevent particulate matter from becoming airborne. The updated BMPs shall also document procedures for chemical dust suppressant application. The Permittee shall update the BMP within 6 months of the CPCN issuance.

The Permittee shall keep the results of the monthly inspections for a period of five (5) years.

The Permittee shall maintain the written reasonable precautions (e.g., BMPs) at the facility and make it available to the Department upon request. [Reference: CPCN No. 9338 Condition B-VI-4, 6, 7 and COMAR 26.11.02.02H]

The Permittee shall report the results of the inspections and a copy of the current BMP plan upon request by the Department. [Reference: COMAR 26.11.03.06C]

NSPS §60.258 – Reporting and Recordkeeping

- (b) For the purpose of reports required under section 60.7(c), any owner operator subject to the provisions of this subpart also shall report semiannually periods of excess emissions as follow:
- (3) All 6-minute average opacities that exceed the applicable standard.
- (d) After July 1, 2011, within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with this subpart, the owner or operator of the affected facility must submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE data base.

**Compliance Methods for the Above (Description and Citation):**

The H. A. Wagner Generating Facility maintains a best management practices (BMP) plan to prevent particulate matter from becoming airborne. This plan was reviewed and revised in November 2016 and is maintained at the facility. Monthly inspections are performed during times of material transfer to ensure BMP are being implemented. Monthly visual emission observations at fugitive points of ash and coal handling equipment are performed to determine whether particulate matter is becoming airborne, if extra precautions are needed, and that limits are met. Records of the results of monthly inspections and visual observations are maintained on-site for a period of five (5) years.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**SECTION V: INSIGNIFICANT ACTIVITIES**

**Emissions Unit ID(s):** Four (4) Stationary Internal Combustion Engines with an output less than 500 BHP

**Permit Term (Describe requirements and cross-reference)**

COMAR 26.11.09.05E(2), which states that a person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.

COMAR 26.11.09.05E(3), which states that a person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

Exceptions.

- (a) Section E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 minutes for the purpose of clearing exhaust system.
- (b) Section E(2) does not apply to emissions resulting directly from cold engine startup and warm-up for the following maximum periods:
  - (i) Engines that are idled continuously when not in service: 30 minutes;
  - (ii) All other engines: 15 minutes.
- (c) Section E(2) and E(3) does not apply while maintenance, repair, or testing is being performed by qualified mechanics.

COMAR 26.11.36.03A(1), which establishes that the Permittee may not operate an emergency generator except for emergencies, testing, and maintenance purposes.

COMAR 26.11.36.03A(5), which establishes that the Permittee may not operate an emergency generator for testing and engine maintenance purposes between 12:01am and 2:00pm on any day on which the Department forecasts that the air quality will be code orange, code red, or code purple unless the engine fails a test and engine maintenance and a re-test are necessary.

Note: Stationary combustion engines include the following:

- (a) Diesel fire pump 232 BHP
- (b) Emergency generator 500 kW
- (c) Fire water pump 185 BHP
- (d) Station bus emergency diesel generator

**Compliance Methods for the Above (Description and Citation):**

No visible emissions were observed in the reporting period based on informal observations.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance



**Emissions Unit ID(s):** Two (2) Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less

**Permit Term (Describe requirements and cross-reference)**

These affected units are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

- (a) COMAR 12.11.19.09D(2)(b), which establishes that the Permittee shall not use an VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20° C;
- (b) COMAR 12.11.19.09D(3)(a-d): which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;
- (c) COMAR 12.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

- (a) Monthly records of the total VOC degreasing materials used; and
- (b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.

**Compliance Methods for the Above (Description and Citation):**

VOC degreasing materials used are within required specifications and the facility observes industry and site best practices to minimize spills and evaporation of degreasing materials. A description of these best practices is posted locally at the degreasing equipment.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**SECTION VI: STATE-ONLY ENFORCEABLE CONDITIONS**

**Emissions Unit ID(s):** State-only enforceable conditions

**Permit Term (Describe requirements and cross-reference)**

*Prevention of nuisances - Facility-Wide requirement*

COMAR 26.11.06.08 which prohibits the operation or maintenance of an installation or premises in such a manner that a nuisance or air pollution is created.

COMAR 26.11.06.09 which prohibits the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.

**Compliance Methods for the Above (Description and Citation):**

The facility utilizes industry best management practices to ensure that the operation and maintenance of the facility creates no nuisance or air pollution beyond what is allowed in the Part 70 permit.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** State-only enforceable conditions

**Permit Term (Describe requirements and cross-reference)**

*For Brandon Shores Unit 1 and 2*

PM CEMS Consent Agreement signed April 19, 2016

- (1) Raven Power shall maintain and operate a Particulate Matter Continuous Emissions Monitoring System ("PM CEMS") downstream of all pollution control devices to record particulate emissions in the flue gas exiting the stacks of Brandon Shores Units 1 and 2 at all times when Units 1 and 2 are operating. Raven Power shall use all reasonable efforts to keep the PM CEMS continuously operating and producing data whenever the Unit served by the applicable PM CEMS is operating, such that the PM CEMS obtains valid hourly averages for a quarter. If in any calendar quarter the valid PM CEMS data is less than ninety five (95) percent, Raven Power shall submit a report to the Department within thirty (30) days of the end of the quarter which shall include:
  - (a) The reason for the monitoring downtime; and
  - (b) All corrective actions identified to improve valid PM CEMS data collection to at least ninety five (95) percent of all Unit operating hours. The report shall identify which corrective actions have been implemented, and shall include a completion schedule for any corrective actions which have not yet been implemented.
- (2) Notwithstanding any other provisions of this Consent Agreement, up to a total of 24 operating hours of invalid data during any calendar quarter shall not be considered a failure to comply with this Consent Agreement unless Brandon Shores failed to use reasonable efforts to operate the PM CEMS on that Unit during the periods of downtime.
- (3) Each PM CEMS shall be comprised of a continuous particle mass monitor measuring particulate matter concentration in grains per dry gas standard cubic feet on a 24-hour rolling average basis, unless State or federal law or regulation require a different averaging period or different procedures, in which case, Raven Power shall be subjected to applicable state or federal requirements.
- (4) Raven Power shall calibrate and operate both PM CEMS in accordance with the Quality Assurance/Quality Control ("QA/QC") protocol previously submitted to and approved by the Department pursuant to the Consent Decree, and developed in accordance with 40 CFR Part 60. The QA/QC protocol may be revised as agreed in writing by Raven Power and the Department.
- (5) PM CEMS data shall be used to demonstrate compliance with applicable particulate matter emissions limitations for Brandon Shores Units 1 and 2. Raven Power shall submit quarterly PM CEMS reports to the Department that comply with COMAR 26.11.01.11E. All data shall be reported in 24-hour rolling averages.
- (6) Raven Power shall maintain, in an electronic database, the average emission values recorded by each PM CEMS.
- (7) Raven Power agrees not to contest the inclusion and incorporation of continuing obligations of this Consent Agreement into future Title V operating permits applicable to Brandon Shores electric generative station.

**Compliance Methods for the Above (Description and Citation):**

See Brandon Shores Unit 1 and 2 Visible Emissions and Particulate Matter Sections above for an explanation of compliance methods.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** State-only enforceable conditions

**Permit Term (Describe requirements and cross-reference)**

*For Brandon Shores Unit 1 and 2 and H.A. Wagner Units 2 and 3*

COMAR 26.11.01.04(A) – Testing and Monitoring

- (1) The Department may require any person to conduct or have conducted testing to determine compliance with this subtitle. The Department, at its option, may witness or conduct these tests. This testing will be done at a reasonable time, and all information gathered during a testing operation will be provided to both parties.

The Permittee shall test for lead emissions once during the term of this permit. The Permittee shall submit a test protocol/notification to the Department for approval at least 30 days prior to test and a notice of intent to test at least 10 days prior to the scheduled test date. The Permittee shall submit the results of the lead emission test in a final report within 60 days from the test completion. The Permittee shall maintain records of the results of the lead emission tests on site for a minimum of at least 5 years.

**Compliance Methods for the Above (Description and Citation):**

Lead testing was performed at Brandon Shores on Unit 1 on August 14, 2019, and on Unit 2 on August 28, 2019, with results of 0.0006 lb/MMBtu and 0.0003 lb/MMBtu, respectively. The results of these tests were submitted to the Department within the time required.

The remaining affected units plan to test for lead emissions once during the term of this permit. Once scheduled, a test protocol will be submitted for MDE approval at least 30 days prior to the test and a notice of intent will be sent at least 10 days before the scheduled test date. Raven Power intends on submitting the results to MDE in a timely fashion and maintain those results on site and electronically for a minimum of 5 years.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** State-only enforceable conditions

**Permit Term (Describe requirements and cross-reference)**

*For Brandon Shores Unit 1 and 2*

COMAR 26.11.09.05C Fuel Burning Equipment Subject to Federal COM Requirements

Except for owners or operators of fuel burning equipment subject to any federal requirement that mandates operation of a COM and as provided in §D of this regulation, the owner or operator of fuel burning equipment required to install and operate a COM may discontinue the operation of the COM on fuel burning equipment that is served by a flue gas desulfurization device:

- (1) When emissions from the equipment do not bypass the flue gas desulfurization device serving the equipment;
- (2) When the flue gas desulfurization device serving the equipment is in operation;
- (3) If the owner or operator has demonstrated to the Department's satisfaction, in accordance with 40 CFR §75.14, as amended, and all other applicable State and federal requirements, that water vapor is present in the flue gas from the equipment and would impede the accuracy of opacity measurements; and
- (4) If the owner or operator has fully implemented an alternative plan, approved by the Department, for monitoring opacity levels and particulate matter emissions from the stack that includes:
  - (a) A schedule for monthly observations of visible emissions from the stack by a person trained to perform Method 9 observations; and



(b) Installation and operation of a particulate matter CEM that complies with all applicable State and federal requirements for particulate matter CEMs.

**Compliance Methods for the Above (Description and Citation):**

See Brandon Shores Unit 1 and 2 Visible Emissions Section above for an explanation of compliance methods.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** State-only enforceable conditions

**Permit Term (Describe requirements and cross-reference)**

*For Wagner Units 1, 2, 3, and 4*

COMAR 26.01.09.05A(4) Fuel Burning Equipment Required to Operate a COM.

The owner or operator of fuel burning equipment that is subject to the requirement to install and operate a COM shall demonstrate compliance with the applicable visible emissions limitation specified in §A(1) and (2) of this regulation as follows:

(a) For units with a capacity factor greater than 25 percent, until December 31, 2009, compliance is achieved if visible emissions do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4 percent of the unit's operating time in any calendar quarter, during which time visible emissions:

- (i) Do not exceed 40.0 percent opacity, except for 5.0 hours or 0.5 percent of the unit's operating time, whichever is greater;
- (ii) Do not exceed 70.0 percent opacity for more than four (4) 6-minute periods, except that -coal-fired units equipped with electrostatic precipitators may exceed 70.0 percent opacity for no more than 2.2 hours; and
- (iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than 1.4 hours and do not exceed 70.0 percent opacity for more than two (2) six-minute periods;

(b) For units with a capacity factor greater than 25 percent, beginning January 1, 2010, compliance is achieved if visible emissions do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 2 percent of the unit's operating time in any calendar quarter, during which time visible emissions:

- (i) Do not exceed 40.0 percent opacity, except for 5.0 hours or 0.5 percent of the unit's operating time, whichever is greater;
- (ii) Do not exceed 70.0 percent opacity for more than four (4) six-minute periods, except that coal-fired units equipped with electrostatic precipitators may exceed 70.0 percent opacity for no more than 2.2 hours; and
- (iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than 1.4 hours and do not exceed 70.0 percent opacity for more than two 6-minute periods;

(c) For units with a capacity factor equal to or less than 25 percent that operate more than 300 hours per quarter, beginning July 1, 2009, compliance with the applicable visible emissions limitation in §A(1) and (2) of this regulation is achieved if, during a calendar quarter, visible emissions do not exceed the applicable standard for more than 20.0 hours, during which time visible emissions:

- (i) Do not exceed 40.0 percent opacity for more than 2.2 hours;

- (ii) Do not exceed 70 percent for more than four 6-minute periods; and
- (iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than 1.4 hours and do not exceed 70.0 percent opacity for more than two 6-minute periods; and

(d) For units with a capacity factor equal to or less than 25 percent that operate less than 300 hours per quarter, beginning July 1, 2009, compliance with the applicable visible emissions limitation in §A(1) and (2) of this regulation is achieved if, during a calendar quarter, visible emissions do not exceed the applicable standard for more than 12.0 hours, during which time visible emissions:

- (i) Do not exceed 40.0 percent opacity for more than 2.2 hours;
- (ii) Do not exceed 70.0 percent opacity for more than four 6-minute periods;
- (iii) On any calendar day, do not exceed the applicable visible emissions limitation in §A(1) and (2) of this regulation for more than 4.1 hours, during which time visible emissions do not exceed 40.0 percent opacity for more than 1.4 hours and do not exceed 70.0 percent opacity for more than two 6-minute periods.

**COMAR 26.11.09.05B. Determining Violations.**

(1) For each unit required to operate a COM pursuant to COMAR 26.11.01.10A(1)(a) and (b), each day during a calendar quarter when the opacity of emissions from that unit during the calendar quarter or calendar day, as applicable, exceeds the emission limitations in §A(4)(a), (b), (c) and (d) of this regulation shall constitute a separate day of violation.

(2) A violation of §A(4)(a)(i), (ii), or (iii), §A(4)(b)(i), (ii) or (iii), §A(4)(c)(i), (ii) or (iii), or §A(4)(d)(i), (ii) or (iii), of this regulation, as applicable, that occur on the same day shall constitute separate violations.

(3) A daily violation that occurs during the same calendar quarter as a quarterly violation is a separate violation.

**Compliance Methods for the Above (Description and Citation):**

See H.A. Wagner visible emissions limitation sections above for an explanation of compliance methods.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** State-only enforceable conditions

**Permit Term (Describe requirements and cross-reference)**

***Healthy Air Act Requirements For Emission Units Brandon Shores Units 1 & 2 and Wagner 2 & 3 only***

These regulations became effective under an Emergency Action on January 18, 2007 and were adopted as permanent regulations on June 17, 2007. They implement the requirements of the Healthy Air Act (Ch. 23, Acts of 2006), which was signed into law on April 6, 2006 and which established emission limitations and related requirements for NO<sub>x</sub>, SO<sub>2</sub> and mercury. Regulations .1-.03, .03E, .05 and .06 related to the reductions of NO<sub>x</sub>, and SO<sub>2</sub> emissions were submitted to EPA as a revision to Maryland's State Implementation Plan (SIP) on June 12, 2007. The requirements for NO<sub>x</sub>, and SO<sub>2</sub> emissions, all except for one were approved by EPA, as a SIP revision on September 4, 2008 with an effective date of October 6, 2008. The requirements for mercury emissions are not part of the Maryland's SIP and are therefore, part of the State-Only Section.

COMAR 26.11.27.03B(7)(iii)

Not later than December 31 of the year in which the emission limitation is exceeded, the owner or operator of the affected generating unit or units transfers to the Maryland Environmental Surrender Account, ozone



season NO<sub>x</sub> allowances equivalent in number to the tons of NO<sub>x</sub> emitted in excess of the emission limitation in §8(4) or (6), as applicable.

COMAR 26.11.27.03D - Mercury Emission Limitations

- (1) For the 12 months beginning January 1, 2010 and ending with the 12 months beginning December 1, 2012 to December 1, 2013, each affected facility shall meet 12-month rolling average removal efficiency for mercury of at least 80 percent.
- (2) For the 12 months beginning January 1, 2013 and thereafter, each affected facility shall meet 12-month rolling average removal efficiency for mercury of at least 90 percent.
- (3) The mercury removal efficiency required in §D(1) and (2) of this regulation shall be determined in accordance with Regulation .04 of this chapter.

COMAR 26.11.27.04 - Determining the Mercury Removal Efficiency for Affected Facilities.

The procedures of §§B - F of this regulation shall be used to demonstrate compliance with the 12-month rolling average removal efficiency required for mercury by Regulation .03D of this chapter. The owner or operator of an affected facility shall notify the Department of the compliance demonstration method it has elected from §§D - F of this regulation on or before January 1, 2010, for the compliance period that commences on that date and on or before January 1, 2013, for the compliance period that commences on that date. The owner or operator of an electric generating unit that elects to demonstrate compliance with the required mercury removal efficiency by meeting the mass emissions limitation in §F of this regulation shall utilize that same method for all other electric generating units in the system. Once elected for each affected facility or system, as applicable, the option may not be changed during the designated compliance period, but may be changed for the next compliance period.

Note: Fort Smallwood Complex selected demonstrating compliance by Meeting a Mercury Mass Emission Cap COMAR 26.11.27.04F(1) and (2) per letter signed by Edwin Much to Ralph Hall dated December 7, 2009.

COMAR 26.11.27.04F(1) thru (5). Demonstrating Compliance by Meeting a Mercury Mass Emission Cap.

- (1) Compliance with the required mercury removal efficiency is demonstrated at an affected facility when the mass emissions from all affected facilities in a system, measured in pounds as a 12-month rolling average, do not exceed the applicable emission limits in §F(2) of this regulation.

(2) Mercury Emission Limits.

Affected Unit	Emission Limit Pounds per Year Beginning
	January 1, 2013
H. A. Wagner Unit 2	46
H. A. Wagner Unit 3	33

- (3) In the event that an electric generating unit at an affected facility subject to this chapter permanently ceases operation, the mass emission limitation in §F(2) of this regulation which is applicable to that affected facility shall be reduced proportionally based on the relative capacity, in megawatts, of all the electric generating units at the affected facility which are subject to this regulation.

- (4) In the event that an entire affected facility within a system permanently ceases operation, the total mass emission limitation in §F(2) which is applicable to the system shall be reduced by the mass emission limitation applicable to the affected facility.

- (5) Except during periods of startup, shutdown, malfunction or maintenance, the owner or operator of an electric generating unit shall ensure that mercury control measures are continuously employed on each unit and properly adjusted for optimal control taking into consideration the operating conditions.

COMAR 26.11.27.05 – Monitoring and Reporting Requirements

- (A) Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.
- (B) Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted not later than March 1 of the following year.
- (C) Each report shall include:
  - (1) Emissions performance results related to compliance with the emissions requirements under this chapter;
  - (2) Emissions of NO<sub>x</sub> and SO<sub>2</sub>, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;
  - (3) A current compliance plan; and
  - (4) Any other information requested by the Department.

**Compliance Methods for the Above (Description and Citation):**

All affected units maintain mercury emissions below the required limits, monitor mercury continuously, and report mercury emissions levels in the quarterly continuous emissions monitoring reports. Compliance is demonstrated by meeting the mercury mass emissions cap for each plant, and annual mercury emissions were submitted with the Healthy Air Act Report on February 26, 2020.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**Emissions Unit ID(s):** State-only enforceable conditions

**Permit Term (Describe requirements and cross-reference)**

***Management of Coal Combustion Byproducts***

COMAR 26.04.10.03B(3) Air Pollution

(a) A person may not engage in the disposal, storage, transportation, processing, handling, or use of coal combustion byproducts without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, when appropriate as determined by the Department, those precautions described in COMAR 26.11.06.03C and D.

(b) In addition to the requirements of paragraph (a), a person may not transport coal combustion byproducts without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, at a minimum the following:

- (i) Vehicles transporting coal combustion byproducts shall be fully enclosed, or fully enclosed on all sides and covered with a firmly secured canvas or similar type covering, so as to prevent any coal combustion byproducts from blowing off, falling off, or spilling out of the vehicle or the coal combustion byproducts shall be handled and transported in sealed containers designed for transportation of powdery solids;
- (ii) Before leaving a site where coal combustion byproducts are loaded or off-loaded, vehicles transporting coal combustion byproducts shall be rendered clean and free of excess material or debris that could blow off, fall off, or spill during transport;
- (iii) Coal combustion byproducts being loaded into or off-loaded from a vehicle shall be sufficiently moistened or otherwise conditioned or contained to prevent particulate coal combustion byproducts from becoming airborne or causing fugitive air emissions; and
- (iv) Transporters of coal combustion byproducts shall maintain an inspection log that shall be maintained in each vehicle at all times during transport of coal combustion byproducts that shall certify compliance with the standards in this regulation .03B(3)(b).

COMAR 26.04.10.05 Storage

A person may not store coal combustion byproducts except in accordance with the provisions of this regulation.

B. A person may not store coal combustion byproducts directly on the surface of the ground or in an unlined surface impoundment, pit, pond, or lagoon without the authorization of the Department.

C. A person shall store coal combustion byproducts in a manner that prevents contact with waters of this State and that is designed either to minimize contact with precipitation or to collect leachate that may result from contact with precipitation.

D. A person may not use a storage system for coal combustion byproducts unless the storage system is:

- (1) Designed, constructed, and installed to contain coal combustion byproducts and contaminants in the coal combustion byproducts and prevent them from being released to the environment; and
- (2) Provided with a roof or other protections to prevent nuisance, air pollution, and unlawful discharges of contaminated storm water or leachate to the waters of this State.

E. A person may not store coal combustion byproducts in an area likely to pollute the waters of this State.

F. Responsibility for the prompt control, containment, and removal of any released coal combustion byproducts or for placing coal combustion byproducts in a position likely to pollute the waters of this State shall be with the person responsible for the release, and with the owner and operator of the facility, site, or storage system where the release occurred. This responsibility shall continue until removal or cleanup of any contamination or pollution from the release has been accomplished to the satisfaction of the Department.

G. The Department may impose specific requirements for the storage of coal combustion byproducts upon a determination that storage of coal combustion byproducts has caused or is likely to cause a discharge to the waters of the State, is a nuisance, or otherwise poses a threat to public health or the environment.

H. The owner and operator of a facility, site, or storage system shall ensure that:

- (1) A release of coal combustion byproducts during storage operations due to spilling or overflowing does not occur;
- (2) Adequate storage space is available to handle the volume of coal combustion byproducts generated and to be stored; and
- (3) Transfer, handling, and storage operations are performed in a manner that shall prevent, contain, and clean up spills of coal combustion byproducts.

COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics"

COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health.

**Compliance Methods for the Above (Description and Citation):**

All coal combustion byproducts were handled, stored, and disposed of in accordance with permit requirements. Reasonable precautions were utilized to prevent particulate matter from becoming airborne, and no releases of coal combustion byproducts from storage occurred in 2019. Raven Power maintained adequate storage space, and the transfer, loading, and storage of coal combustion byproducts was performed adequately.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance



**Emissions Unit ID(s):** State-only enforceable conditions

**Permit Term (Describe requirements and cross-reference)**

*For Brandon Shores Emergency Generator*

COMAR 26.11.36.03 - Emergency Generator and Load Shaving Units NO<sub>x</sub> Requirements

(A) Applicability and General Requirements for Emergency Generators and Load Shaving Units.

(1) The owner or operator of an emergency generator may not operate the generator except for emergencies, testing, and maintenance purposes.

(5) The owner or operator of an emergency generator or load shaving unit may not operate the engine for testing and engine maintenance purposes between 12:01 a.m. and 2:00 p.m. on any day on which the Department forecasts that the air quality will be code orange, code red, or code purple unless the engine fails a test and engine maintenance and a re-test are necessary.

**Compliance Methods for the Above (Description and Citation):**

The 670 HP emergency generator was operated in 2019 for preventative maintenance or testing purposes only. The generator was only operated on days that were not designated poor air quality days (Code Orange, Red, or Purple).

**Emissions Unit ID(s):** State-only enforceable conditions

**Permit Term (Describe requirements and cross-reference)**

*For Brandon Shores Unit 1 and 2 and H.A. Wagner Units 2 and 3*

COMAR 26.11.38 – Control of NO<sub>x</sub> Emissions from Coal-Fired Electric Generating Units

COMAR 26.11.38.03- NO<sub>x</sub> Emission Control Requirements

(A) Daily NO<sub>x</sub> Reduction Requirements During the Ozone Season

(1) The owner or operator of an affected electric generating unit shall submit a plan to the Department and EPA for approval that demonstrated how each affected electric generating unit (“the unit”) will operate installed pollution control technology and combustion controls to meet the requirements of §A(2) of this regulation. The plan shall cover all modes of operation, including but not limited to normal operations, start-up, shutdown and low load operations.

(2) Beginning on May 1, 2015, for each operating day during the ozone season, the owner or operator of an affected electric generating unit shall minimize NO<sub>x</sub> emissions by operating and optimizing the use of all installed pollution control technology and combustion controls consistent with the technological limitations, manufacturers’ specification, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions (as defined in 40 CFR §60.11(d)) for such equipment and the unit at all times the unit is in operation while burning any coal.

(B) Ozone Season NO<sub>x</sub> Reduction Requirements

(1) Except as provided in §B(3) of this regulation, the owner or operator of an affected electric generating unit shall not exceed a NO<sub>x</sub> 30-day system-wide rolling average emission rate of 0.15 lb/MMBtu during the ozone season.

(2) The owner or operator of an affected electric generating unit subject to the provisions of this regulation shall continue to meet ozone season NO<sub>x</sub> reduction requirements in COMAR 26.11.27.

(C) Annual NO<sub>x</sub> Reduction Requirements

The owner or operator of an affected electric generating unit subject to the provisions of this regulation shall continue to meet the annual NO<sub>x</sub> reduction requirements in COMAR 26.11.27

COMAR 26.11.38.04 – Additional NO<sub>x</sub> Emission Control Requirements

(A) This regulation applies to H.A. Wagner Unit 2

(B) General Requirements. The owner or operator of the affected electric generating units subject to this regulation shall choose from the following:

- (1) Not later than June 1, 2020:
  - a. Install and operate a selective catalytic reduction (SCR) control system; and
  - b. Meet a NO<sub>x</sub> emission rate of 0.09 lb/MMBtu, as determined on a 30-day rolling average during the ozone season;
- (2) Not later than June 1, 2020, permanently retire the unit;
- (3) Not later than June 1, 202, permanently switch fuel from coal to natural gas for the unit;
- (4) Not later than June 1, 2020, meet either a NO<sub>x</sub> emission rate of 0.13 lb/MMBtu as determined on a 24-hour system wide block average or a system wide NO<sub>x</sub> tonnage cap of 21 tons per day during the ozone season.

COMAR 26.11.38.05 – Compliance Demonstration Requirements

(A) Procedures for Demonstrating Compliance with Regulation 0.3A of this Chapter.

- (1) An affected electric generating unit shall demonstrate, to the Department's satisfaction, compliance with Regulation 0.3A(2) of this chapter, using the information collected and maintained in accordance with Regulation 0.3A(1) of this chapter and any additional documentation available to and maintained by the affected electric generating unit.
- (2) An affected electric generating unit shall not be required to submit a unit-specific report consistent with §A(3) of this regulation when the unit emits at levels that are at or below the following rates:

Affected Unit	24-Hour Block Average NO <sub>x</sub> Emissions in lb/MMBtu
Brandon Shores Unit 1	0.08
Brandon Shores Unit 2 <650 MWg	0.07
Brandon Shores Unit 2 ≥650 MWg	0.15
H.A. Wagner Unit 2	0.34
H.A. Wagner Unit 3	0.07

- (3) The owner or operator of an affected electric generating unit subject to Regulation 0.3A(2) of this chapter shall submit a unit-specific report for each day the unit exceeds its NO<sub>x</sub> emission rate under §A(2) of this regulation, which shall include the following information for the entire operating day:
  - (a) Hours of operation for the unit;
  - (b) Hourly averages of operating temperature of installed pollution control technology;
  - (c) Hourly averages of heat input (MMBtu/hr);
  - (d) Hourly averages of output (MWh);
  - (e) Hourly averages of ammonia or urea flow rates;
  - (f) Hourly averages of NO<sub>x</sub> emissions data (lbs/MMBtu and tons);
  - (g) Malfunction data;
  - (h) The technical and operational reason the rate was exceeded, such as:
    - (1) Operator error;
    - (2) Technical events beyond the control of the owner or operator (e.g. acts of God, malfunctions); or
    - (3) Dispatch requirements that mandatory unplanned operation (e.g. start-ups and shut-downs, idling, and operation at low voltage or low load);
  - (i) A written narrative describing any actions taken to reduce emission rates; and

- (j) Other information that the Department determines is necessary to evaluate the data or to ensure that compliance is achieved.
- (4) An exceedance of the emissions rate under §A(2) of this regulation as a result of factors including but not limited to start-up, shut-down, days when the unit was directed by the electric grid operator to operate at low load or to operate pursuant to any emergency generation operations required by the electric grid operator, including necessary testing for such emergency operations, or which otherwise occurred during operations which are deemed consistent with the unit's technological limitations, manufacturer's specifications, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions, shall not be considered a violation of Regulation 0.3A(2) of this chapter provided that the provisions of the approved plan as required in Regulation .03A(1) of this chapter are met.
- (B) Procedures for Demonstrating Compliance with NO<sub>x</sub> Emission Rates under this Chapter.
  - (1) Compliance with the NO<sub>x</sub> emission rate limitations in Regulations .03B(1) and D(2), .04B(1)(b), B(4), C(1), C(2), C(3), and E(1)(b), and .05A(2) of this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.
  - (2) For Regulation .03B(1), .04C(1), C(2), and C(3) of this chapter, in order to calculate the 30-day system wide rolling average emission rates, if 29 system operating days are not available from the current ozone season, system operating days from the previous ozone season shall be used.
  - (3) For Regulation .04B(1)(b) of this chapter, in order to calculate the 30-day rolling average emission rates, if 29 operating days are not available from the current ozone season, operating days from the previous ozone season shall be used.

#### COMAR 26.11.38.06 – Reporting Requirements

- (A) Reporting Schedule
  - (1) Beginning 30 days after the first month of the ozone season following the effective date of this chapter, each affected electric generating unit subject to the requirements of this chapter shall submit a monthly report to the Department detailing the status of compliance with this chapter during the ozone season.
  - (2) Each subsequent monthly report shall be submitted to the Department not later than 30 days following the end of the calendar month during the ozone season.
- (B) Monthly Reports During Ozone Season - Monthly reports during the ozone season shall include:
  - (1) Daily pass or fail of the NO<sub>x</sub> emission rates of .05A(2) of this chapter;
  - (2) The reporting information as required under .05A(3) of this chapter; and
  - (3) The 30-day system-wide rolling average emissions rate for each affected electric generating unit to demonstrate compliance with .03B(1), .04C(1), C(2), and C(3) of this chapter, as applicable;
  - (4) For an affected electric generating unit which has selected the compliance option of Regulation .04B(1) of this chapter, beginning June 1, 2020, the 30-day rolling average emission rate calculated in lb/MMBtu;
  - (5) For an affected electric generating unit which has selected the compliance option of Regulation .04B(4) of this chapter, beginning June 1, 2016, the 30-day rolling average emission rate and 30-day system wide rolling average emission rate calculated in lbs/MMBtu;
  - (6) For an affected electric generating unit which has selected the compliance option of Regulation .04B(4) of this chapter, beginning June 1, 2020, data, information and calculation which demonstrate the system wide NO<sub>x</sub> emission rate as determined on a 24-hr block or the actual system wide daily NO<sub>x</sub> emissions in tons for each day during the month; and

#### COMAR 26.11.38.06 – Electric System Reliability During Ozone Season

- (A) In the event of emergency operations, a maximum of 12 hours of operations per system per ozone season may be removed from the calculation of the NO<sub>x</sub> limitations in Regulation .04B(4) of this chapter from the unit or units responding to the emergency operations provided that:
  - (1) Within one business day following the emergency operation, the owner or operator of the affected electric generating unit or units notifies the Manager of the Air Quality Compliance Program of the emergency operations taken by the PJM Interconnection; and

- (2) Within five business days following the emergency operation, the owner or operator of the affected electric generating unit or units provides the Department with the following information:
- (a) PJM documentation of the emergency event called and the unit or units requested to operate;
  - (b) Unit or units dispatched for the emergency operation;
  - (c) Number of hours that the unit or units responded to the emergency operation and the consecutive hours that will be used towards the calculation of the NO<sub>x</sub> limitations in §.04B(4) of this chapter; and
  - (d) Other information regarding efforts the owner or operator took to minimize NO<sub>x</sub> emissions in accordance with Regulation .03A(1) of this chapter on the day that the emergency operation was called.

(B) Any partial hour in which a unit operated in response to emergency operation under §A of this regulation shall constitute a full hour of operations.

**Compliance Methods for the Above (Description and Citation):**

The Brandon Shores and H. A. Wagner Generating Stations operate and maintain NO<sub>x</sub> emissions controls and a certified NO<sub>x</sub> CEM approved by the Department and the EPA on each unit. NO<sub>x</sub> CEMs are certified in accordance with Part 75, Appendix A.

Monthly reports detailing NO<sub>x</sub> emissions compliance data were submitted to the Department during ozone season, and an annual report detailing NO<sub>x</sub> and ozone season NO<sub>x</sub> was submitted to the Department on February 26, 2020. Any reports of daily non-compliance are submitted to the Department and EPA Region III quarterly. Written notice is sent to the Manager of the Air Quality Compliance Program when cumulative ozone season NO<sub>x</sub> emissions are equal to or greater than 80 per cent of the applicable ozone season limitation, which did not occur in 2019.

The NO<sub>x</sub> RACT annual certification was submitted on March 27, 2020, as required.

**Status (Check one):**  Intermittent Compliance  Continuous Compliance

**C. DEVIATION FROM PERMIT TERMS AND CONDITIONS**

Report all deviations from permit terms (whether reported previously or not) that occurred during the permit term. Cross-reference deviations already reported in the six-month report. Indicate whether each deviation is a possible exception to compliance. Start and end period of each deviation should be in mo/day/yr, hr:min format (24-hour clock). Also specify the date when the written deviation report was submitted (If written report required, but not submitted, leave the date field blank).

**Permit Term for Which There was a Deviation:** Visible Emissions Limitation

COMAR 26.11.09.05A(2) - Visible Emissions

In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in a combined form, which is visible to human observers.

**Emissions Units (Unit IDs):** FSC-HAW-Unit 1

**Deviation Start:** See Below **End:** See Below

- 01/30/2019 11:42 to 01/30/2019 11:47
- 01/30/2019 12:48 to 01/30/2019 12:59
- 01/30/2019 13:30 to 01/30/2019 13:35
- 01/30/2019 14:06 to 01/30/2019 14:29
- 01/30/2019 15:00 to 01/30/2019 15:11
- 01/30/2019 15:54 to 01/30/2019 15:59



01/30/2019 16:12 to 01/30/2019 16:23  
01/30/2019 16:42 to 01/30/2019 16:47  
01/31/2019 09:18 to 01/31/2019 09:29  
01/31/2019 12:30 to 01/31/2019 12:35  
01/31/2019 13:06 to 01/31/2019 13:11  
01/31/2019 15:12 to 01/31/2019 15:23  
01/31/2019 16:48 to 01/31/2019 17:11  
01/31/2019 17:18 to 01/31/2019 17:29  
04/27/2019 08:54 to 04/27/2019 09:05  
07/24/2019 11:18 to 07/24/2019 11:23  
07/24/2019 11:48 to 07/24/2019 11:53  
12/03/2019 03:18 to 12/03/2019 03:29  
12/03/2019 09:30 to 12/03/2019 09:35

**Date Written Report(s) Submitted:**

1<sup>st</sup> Quarter 2019 CEMs report submitted on April 26, 2019  
2<sup>nd</sup> Quarter 2019 CEMS report submitted on July 26, 2019  
3<sup>rd</sup> Quarter 2019 CEMs report submitted on October 28, 2019  
4<sup>th</sup> Quarter 2019 CEMs report submitted on January 27, 2020

**Permit Term for Which There was a Deviation:** Visible Emissions Limitation

COMAR 26.11.09.05A(2) - Visible Emissions

In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in a combined form, which is visible to human observers.

**Emissions Units (Unit IDs):** FSC-HAW-Unit 2

**Deviation Start:** See Below    **End:** See Below

01/28/2019 23:48 to 01/28/2019 23:53  
06/13/2019 13:06 to 06/13/2019 12:23  
06/14/2019 09:42 to 06/14/2019 09:47  
07/29/2019 10:36 to 07/29/2019 10:41  
07/29/2019 15:24 to 07/29/2019 15:29  
07/29/2019 15:36 to 07/29/2019 15:41  
07/29/2019 16:24 to 07/29/2019 16:47  
08/04/2019 08:54 to 08/04/2019 08:59  
12/10/2019 10:06 to 12/10/2019 10:11

**Date Written Report(s) Submitted:**

1<sup>st</sup> Quarter 2019 CEMs report submitted on April 26, 2019  
2<sup>nd</sup> Quarter 2019 CEMs report submitted on July 26, 2019  
3<sup>rd</sup> Quarter 2019 CEMs report submitted on October 28, 2019  
4<sup>th</sup> Quarter 2019 CEMs report submitted on January 27, 2020



**Permit Term for Which There was a Deviation:** Visible Emissions Limitation

COMAR 26.11.09.05A(2) - Visible Emissions

In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in a combined form, which is visible to human observers.

**Emissions Units (Unit IDs):** FSC-HAW-Unit 3

**Deviation Start:** See Below    **End:** See Below

01/28/2019 00:30 to 01/28/2019 00:35  
03/18/2019 10:06 to 03/18/2019 10:17  
03/27/2019 04:12 to 03/27/2019 04:23  
07/14/2019 02:42 to 07/14/2019 02:47  
07/17/2019 03:36 to 07/17/2019 04:05  
07/17/2019 04:12 to 07/17/2019 04:35  
07/17/2019 04:54 to 07/17/2019 05:17  
07/17/2019 05:30 to 07/17/2019 06:05  
07/17/2019 06:18 to 07/17/2019 06:23  
07/17/2019 06:48 to 07/17/2019 06:59  
07/17/2019 07:18 to 07/17/2019 07:29  
07/17/2019 08:42 to 07/17/2019 08:47  
07/17/2019 09:48 to 07/17/2019 09:59  
07/17/2019 10:06 to 07/17/2019 10:11  
07/17/2019 10:30 to 07/17/2019 10:35  
07/17/2019 10:48 to 07/17/2019 10:53  
07/29/2019 14:36 to 07/29/2019 14:41  
07/31/2019 23:00 to 07/31/2019 23:05  
08/14/2019 08:12 to 08/14/2019 08:17  
08/14/2019 08:30 to 08/14/2019 08:35  
09/22/2019 16:36 to 09/22/2019 16:47  
09/23/2019 05:48 to 09/23/2019 05:53  
09/23/2019 06:00 to 09/23/2019 06:11  
09/29/2019 14:06 to 09/29/2019 14:11  
10/06/2019 07:00 to 10/06/2019 07:05  
10/31/2019 05:48 to 10/31/2019 05:59  
12/15/2019 21:48 to 12/15/2019 21:53

**Date Written Report(s) Submitted:**

1<sup>st</sup> Quarter 2019 CEMs report submitted on April 26, 2019  
3<sup>rd</sup> Quarter 2019 CEMs report submitted on October 28, 2019  
4<sup>th</sup> Quarter 2019 CEMs report submitted on January 27, 2020

**Permit Term for Which There was a Deviation:** Visible Emissions Limitation

COMAR 26.11.09.05A(2) - Visible Emissions

In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in a combined form, which is visible to human observers.

**Emissions Units (Unit IDs):** FSC-HAW-Unit 4

**Deviation Start:** See Below    **End:** See Below

07/23/2019 09:00 to 07/23/2019 09:05

07/31/2019 11:00 to 07/31/2019 11:17

07/31/2019 11:30 to 07/31/2019 11:41

07/31/2019 13:12 to 07/31/2019 13:17

07/31/2019 13:48 to 07/31/2019 13:59

07/31/2019 17:36 to 07/31/2019 17:47

**Date Written Report(s) Submitted:**

3<sup>rd</sup> Quarter 2019 CEMs report submitted on October 28, 2019