Division of Air Quality Permit Application Submittal

Please find attached a permit application for : Appalachian Power Company, Mountaineer Plant, New Haven, WV

[Company Name; Facility Location]

- DAQ Facility ID (for existing facilities only): 053-00009
- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only): R30-05300009-2020(MM01)

- Type of NSR Application (check all that apply):
  - ☐ Construction
  - ☐ Modification
  - ☐ Class I Administrative Update
  - ☐ Class II Administrative Update
  - ☐ Relocation
  - ☐ Temporary
  - ☐ Permit Determination

- Type of 45CSR30 (TITLE V) Application:
  - ☐ Title V Initial
  - ☑ Title V Renewal
  - ☐ Administrative Amendment**
  - ☐ Minor Modification**
  - ☐ Significant Modification**
  - ☐ Off Permit Change

****If the box above is checked, include the Title V revision information as ATTACHMENT S to the combined NSR/Title V application.**

- Payment Type:
  - ☐ Credit Card (Instructions to pay by credit card will be sent in the Application Status email.)
  - ☐ Check (Make checks payable to: WVDEP – Division of Air Quality)

    Mail checks to:
    WVDEP – DAQ – Permitting
    Attn: NSR Permitting Secretary
    601 57th Street, SE
    Charleston, WV 25304

Please wait until DAQ emails you the Facility ID Number and Permit Application Number. Please add these identifiers to your check or cover letter with your check.

- If the permit writer has any questions, please contact (all that apply):
  - ☑ Responsible Official/Authorized Representative
    - Name: Jerry L. Perry II
    - Email: jlperry@aep.com
    - Phone Number: 304-882-4106
  - ☑ Company Contact
    - Name: Jill Lukehart
    - Email: jnlukehart@aep.com
    - Phone Number: 614-716-1762
  - ☑ Consultant
    - Name: David J. Long
    - Email: djlong@aep.com
    - Phone Number: 614-716-1245

Appalachian Power Company
Mountaineer Plant

Regulation 30 Renewal Permit Application

Prepared By:
Appalachian Power Company
Mountaineer Plant
State Route 62
New Haven, WV 25265

and

American Electric Power
Environmental Services
1 Riverside Plaza
Columbus, Ohio 43215

July 2024

Appalachian Power Company
Mountaineer Plant

Regulation 30 Permit Renewal Application

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WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475
www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. **Name of Applicant (As registered with the WV Secretary of State's Office):**
Appalachian Power Company

2. Facility Name or Location:
Mountaineer Plant
New Haven, West Virginia

3. DAQ Plant ID No.:
053-00009

4. Federal Employer ID No. (FEIN):
91-1030509

5. **Permit Application Type:**

☐ Initial Permit — When did operations commence? 1980
☑ Permit Renewal — What is the expiration date of the existing permit? 3/10/2025
☐ Update to Initial/Renewal Permit Application

6. Type of Business Entity:

☑ Corporation ☐ Governmental Agency ☐ LLC
☐ Partnership ☐ Limited Partnership

7. Is the Applicant the:

☐ Owner ☐ Operator ☑ Both

If the Applicant is not both the owner and operator, please provide the name and address of the other party.

8. Number of onsite employees:
166 Employees Currently Onsite

9. Governmental Code:

☑ Privately owned and operated; 0
☐ Federally owned and operated; 1
☐ State government owned and operated; 2
☐ County government owned and operated; 3
☐ Municipality government owned and operated; 4
☐ District government owned and operated; 5

10. Business Confidentiality Claims

Does this application include confidential information (per 45CSR31)? ☐ Yes ☑ No

If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's *"PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY"* guidance.

11. Mailing Address		
Street or P.O. Box: Appalachian Power Company (dba American Electric Power); 1 Riverside Plaza		
City: Columbus	**State:** OH	**Zip:** 43215
Telephone Number: 614-716-1000	**Fax Number:**	

12. Facility Location (Physical Address)		
Street: State Route 62	**City:** New Haven	**County:** Mason
UTM Easting: 419.04 km	**UTM Northing:** 4314.70 km	**Zone:** ☑ 17 or ☐ 18
Directions: Facility is located on State Route 62, 1-mile east of New Haven, West Virginia		
Portable Source? ☐ Yes ☑ No		
Is facility located within a nonattainment area? ☐ Yes ☑ No		**If yes, for what air pollutants?**
Is facility located within 50 miles of another state? ☑ Yes ☐ No		**If yes, name the affected state(s).** Ohio
Is facility located within 100 km of a Class I Area[1]? ☐ Yes ☑ No **If no, do emissions impact a Class I Area[1]?** ☐ Yes ☑ No		**If yes, name the area(s).**

[1] *Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.*

13. Contact Information		
Responsible Official: Jerry L. Perry II		**Title:** Plant Manager
Street or P.O. Box: P.O. Box 419		
City: New Haven	**State:** WV	**Zip:** 26265
Telephone Number: (304)-882-4106	**Cell Number:**	
E-mail address: jlperry@aep.com		
Environmental Contact: Jill Lukehart		**Title:** Manager, Air Quality
Street or P.O. Box: 1 Riverside Plaza		
City: Columbus	**State:** OH	**Zip:** 43215
Telephone Number: (614)-716-1762	**Cell Number:**	
E-mail address: jnlukehart@aep.com		
Application Preparer: David Long		**Title:** Staff Engineer Environmental
Company: American Electric Power Service Corporation		
Street or P.O. Box: 1 Riverside Plaza		
City: Columbus	**State:** OH	**Zip:** 43215
Telephone Number: (614)-716-1245	**Cell Number:**	
E-mail address: djlong@aep.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Electric Generation	Electricity	221112	4911

Provide a general description of operations.

The Mountaineer Plant is a fossil fuel fired electric generation facility operating under the Standard Industrial Code (SIC) 4911. The facility consists of a coal fired steam generator supplying steam to a turbine driven electric generator along with two #2 fuel oil fire fired auxiliary boilers that provide auxiliary steam services to the facility. The facility also includes various supporting operations that include but are not limited to coal handling, ash handling gypsum handling, limestone handling, wastewater treatment system filter cake handling, and various tanks with insignificant emissions. The facility has the potential to operate seven days per week, twenty-four horus per day, 52 weeks per year.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
☑ SIP	☐ FIP
☑ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☑ NESHAP (45CSR34)	☐ Nonattainment NSR (45CSR19)
☑ Section 111 NSPS	☑ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☑ 45CSR4 State enforceable only rule	☑ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☑ **C**ompliance **A**ssurance **M**onitoring (40CFR64)
☑ Cross-State Air Pollution Rule (45CSR43)	

19. Non Applicability Determinations

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

• 40 C.F.R. 63 Subpart Q – National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers: Mountaineer's Cooling Tower does not use chromium-based water treatment chemicals.

• 40 C.F.R. 60 Subpart Y – Standards of Performance for Coal Preparation Plants: The Mountaineer coal crushers were installed prior to October 24, 1974 and have not undergone a "modification" as defined in 40 CFR 60.

• 40 C.F.R. 60 Subpart OOO – Standards of Performance for Non-Metallic Minerals Processing: The Mountaineer Limestone unloading system, from the river barge unloader to and including the storage pile do not apply since no processing occurs in this portion of the system.

• 45CSR5 – To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants, Coal Handling Operations and Coal Refuse Disposal Areas: The facility is subject to 45CSR2 in lieu of 45CSR5.

• 45CSR17 - To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter: The facility is subject to 45CSR2 in lieu of 45CSR17.

☑ Permit Shield

19. Non Applicability Determinations *(Continued)* - *Attach additional pages as necessary.*

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

• 40 C.F.R. 60 Subpart Da – Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978: The Mountaineer Plant electric utility steam generating unit commenced construction prior to September 18, 1978 and have not undergone a "modification" as defined in 40 C.F.R. 60.

• 40 C.F.R. 60 Subpart K – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973 and Prior to May 19, 1978: The facility does not include storage vessels that are used to store petroleum liquids (as defined in 40 C.F.R. § 60.111(b)) and that have a storage capacity greater than 40,000 gallons for which construction, reconstruction or modification was commenced after June 11, 1973 and prior to May 19, 1978.

• 40 C.F.R. 60 Subpart Ka – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and Prior to July 23, 1984: The facility does not include storage vessels that are used to store petroleum liquids (as defined in 40 C.F.R. § 60.111(b)) and that have a storage capacity greater than 40,000 gallons for which construction, reconstruction or modification was commenced after May 18, 1978 and prior to July 23, 1984.

• 40 C.F.R. 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984: The facility storage vessels that are potentially affected by this rule are exempted because they contain liquids with a maximum true vapor pressure of less than 3.5 kPa, have a storage capacity of less than 75 cubic meters, or have not commenced construction, reconstruction or modification after July 23, 1984.

☑ Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*).

- 45CSR6, R30-05300009-2014 Section 3.1.1 and 3.1.2 (Open Burning)
- 40CFR61, R30-05300009-2014 Section 3.1.3 (Asbestos)
- 45CSR4, R30-05300009-2014 Section 3.1.4 (Odor)
- 45CSR11-5.2, R30-05300009-2014 Section 3.1.6 (Standby Plan)
- WV Code 22-5-4(a)(14), R30-05300009-2014 Section 3.1.7 (Emission Inventory)
- 40CFR82, R30-05300009-2014 Section 3.1.8 (Ozone-depleting Substances)
- 40CFR68, R30-05300009-2014 Section 3.1.9 (Risk Management Plan)
- 45CSR2, R30-05300009-2014 Section 3.1.12 (Fugitive Particulate Matter Control)
- 40 CFR 97.406, R30-05300009-2014 Section 3.1.13 (TR NOx Annual Trading Program)
- 40 CFR 97.506, R30-05300009-2014 Section 3.1.14 (TR NOx Ozone Season Trading Program)
- 40 CFR 97.606, R30-05300009-2014 Section 3.1.15 (TR SO2 Group 1 Trading Program)
- R30-05300009-2014 Section 3.1.16, R13-0075 Section 4.1.20 (Operation and Maintenance of Air Pollution Control Equipment)

☑ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR2, 45CSR10, and WV Code 22-5-4(a), R30-05300009-2014 Section 3.3.1 (Stack Testing)
- 45CSR30-5.1.c.2.A, R30-05300009-2014 Section 3.4.1 (Monitoring Information)
- 45CSR30-5.1.c.2.B, R30-05300009-2014 Section 3.4.2 (Retention of Records)
- 45CSR30-5.1.c, R30-05300009-2014 Section 3.4.3 (Odors)
- 45CSR30-5.1.c, R30-05300009-2014 Section 3.4.4 (Fugitive Particulate Matter Control)
- 45CSR13, R30-05300009-2014 Section 3.4.5 (Maintenance of Air Pollution Control Equipment)
- 45CSR13, R30-05300009-2014 Section 3.4.6 (Malfunctions of Air Pollution Control Equipment)
- 45CSR30-5.1.c.3, R30-05300009-2014 Sections 3.5.1-3.5.3 (Reporting Requirements)
- 45CSR30-8, R30-05300009-2014 Section 3.5.4 (Certified Emissions Statement)
- 45CSR30-5.3.e, R30-05300009-2014 Section 3.5.5 (Compliance Certification)
- 45CSR30-5.1.c.3.A, R30-05300009-2014 Section 3.5.6 (Semi-Annual Monitoring Reports)
- R30-05300009-2014 Section 3.5.7 (Emergency Reporting)
- 45CSR30-5.1.c.3, R30-05300009-2014 Section 3.5.8 (Deviation Reports)
- 45CSR30-4.3. f.1.B, R30-05300009-2014 Section 3.5.9 (New Applicable Requirements)

Are you in compliance with all facility-wide applicable requirements? ☑ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

20. Facility-Wide Applicable Requirements *(Continued)* - *Attach additional pages as necessary.*

List all facility-wide applicable requirements. For each applicable requirement, include the rule citation and/or permit with the condition number.

☐ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/ reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Are you in compliance with all facility-wide applicable requirements? ☐ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit *(if any)*
R13-0075I	02/03/2017	
PD04-063	08/05/2004	
R33-6264-2017-4A	01/01/2013	
NOx Budget Permit Application	12/26/2012	
US District Court Consent Decree regarding Civil Actions C2-99-1182, C2-05-360, and C2-04-1098	12/13/2007	
R30-05300009-2014	10/15/2014	
G60-C062	08/19/2014	
R13-0075J	04/08/2021	

22. Inactive Permits/Obsolete Permit Conditions		
Permit Number	Date of Issuance MM/DD/YYYY	Permit Condition Number
R13-0075	04/24/1974	
R13-0075B	09/09/2002	
R13-0075C	10/08/2003	
R13-0075D	05/26/2005	
R13-0075E	03/09/2006	
R13-0075F	04/24/2006	
R13-0075G	09/28/2009	
R13-0075H	08/14/2015	
CO-R2,10,16-98-3	03/24/1998	
CO-R13-E-2001-01	01/12/2001	
R30-05300009-2009	04/17/2009 Revised 02/28/2011	

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	1897
Nitrogen Oxides (NO_X)	46168
Lead (Pb)	1.73
Particulate Matter ($PM_{2.5}$)[1]	2348
Particulate Matter (PM_{10})[1]	3205
Total Particulate Matter (TSP)	6255
Sulfur Dioxide (SO_2)	79294
Volatile Organic Compounds (VOC)	225
Hazardous Air Pollutants[2]	Potential Emissions
Arsenic	1.93
Beryllium	0.11
Chromium	1.81
Cobalt	0.55
Manganese	2.19
Regulated Pollutants other than Criteria and HAP	Potential Emissions

[1]$PM_{2.5}$ and PM_{10} are components of TSP.
[2]For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	
Nitrogen Oxides (NO_X)	
Lead (Pb)	
Particulate Matter ($PM_{2.5}$)[1]	
Particulate Matter (PM_{10})[1]	
Total Particulate Matter (TSP)	
Sulfur Dioxide (SO_2)	
Volatile Organic Compounds (VOC)	
Hazardous Air Pollutants[2]	Potential Emissions
Mercury	0.32
Nickel	1.57
Selenium	4.95
Hydrochloric Acid	4562
Hydrofluoric Acid	570
Regulated Pollutants other than Criteria and HAP	Potential Emissions

[1]$PM_{2.5}$ and PM_{10} are components of TSP.
[2]For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)		
☑	1.	Air compressors and pneumatically operated equipment, including hand tools.
☑	2.	Air contaminant detectors or recorders, combustion controllers or shutoffs.
☑	3.	Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
☑	4.	Bathroom/toilet vent emissions.
☑	5.	Batteries and battery charging stations, except at battery manufacturing plants.
☑	6.	Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
☐	7.	Blacksmith forges.
☑	8.	Boiler water treatment operations, not including cooling towers.
☑	9.	Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10.	CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.
☑	11.	Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☑	12.	Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☑	13.	Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☑	14.	Demineralized water tanks and demineralizer vents.
☐	15.	Drop hammers or hydraulic presses for forging or metalworking.
☐	16.	Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
☐	17.	Emergency (backup) electrical generators at residential locations.
☑	18.	Emergency road flares.
☐	19.	Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO_2, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:

24. Insignificant Activities (Check all that apply)		
☐	20.	Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:
☐	21.	Environmental chambers not using hazardous air pollutant (HAP) gases.
☑	22.	Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
☐	23.	Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
☑	24.	Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
☑	25.	Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
☑	26.	Fire suppression systems.
☑	27.	Firefighting equipment and the equipment used to train firefighters.
☑	28.	Flares used solely to indicate danger to the public.
☑	29.	Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
☐	30.	Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
☑	31.	Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
☐	32.	Humidity chambers.
☑	33.	Hydraulic and hydrostatic testing equipment.
☑	34.	Indoor or outdoor kerosene heaters.
☑	35.	Internal combustion engines used for landscaping purposes.
☐	36.	Laser trimmers using dust collection to prevent fugitive emissions.
☑	37.	Laundry activities, except for dry-cleaning and steam boilers.
☐	38.	Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
☑	39.	Oxygen scavenging (de-aeration) of water.
☐	40.	Ozone generators.

24. Insignificant Activities (Check all that apply)		
☑	41.	Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
☑	42.	Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
☑	43.	Process water filtration systems and demineralizers.
☑	44.	Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
☑	45.	Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☑	46.	Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☐	47.	Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48.	Shock chambers.
☐	49.	Solar simulators.
☑	50.	Space heaters operating by direct heat transfer.
☐	51.	Steam cleaning operations.
☑	52.	Steam leaks.
☐	53.	Steam sterilizers.
☑	54.	Steam vents and safety relief valves.
☐	55.	Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
☐	56.	Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
☐	57.	Such other sources or activities as the Director may determine.
☑	58.	Tobacco smoking rooms and areas.
☑	59.	Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the **Title V Equipment Table** and provide it as **ATTACHMENT D**.
26. Emission Units
For each emission unit listed in the **Title V Equipment Table**, fill out and provide an **Emission Unit Form** as **ATTACHMENT E**.
For each emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**.
27. Control Devices
For each control device listed in the **Title V Equipment Table**, fill out and provide an **Air Pollution Control Device Form** as **ATTACHMENT G**.
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**.

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

Note: This Certification must be signed by a responsible official as defined in 45CSR§30-2.38.

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. 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 and/or imprisonment.

b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name:	Title:
Jerry L. Perry II	Plant Manager

Responsible official's signature:

Signature: Jerry L. Perry II Signature Date: 7/26/24

(Must be signed and dated in blue ink or have a valid electronic signature)

Note: Please check all applicable attachments included with this permit application:

☑	ATTACHMENT A: Area Map
☑	ATTACHMENT B: Plot Plan(s)
☑	ATTACHMENT C: Process Flow Diagram(s)
☑	ATTACHMENT D: Equipment Table
☑	ATTACHMENT E: Emission Unit Form(s)
☐	ATTACHMENT F: Schedule of Compliance Form(s)
☑	ATTACHMENT G: Air Pollution Control Device Form(s)
☑	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

Attachment A

Area Map

Mountaineer Plant
WV DEP - DAQ
Parkersburg
Pomeroy
Point Pleasant
Gallipolis
Ripley
Spencer
Charleston
St Albans
Huntington
Ashland
Jackson
Elizabeth
Grantsville
Harrisville
Clay
Madison
Fayetteville
Winfield
Hamlin
Wayne
Louisa
Catlettsburg
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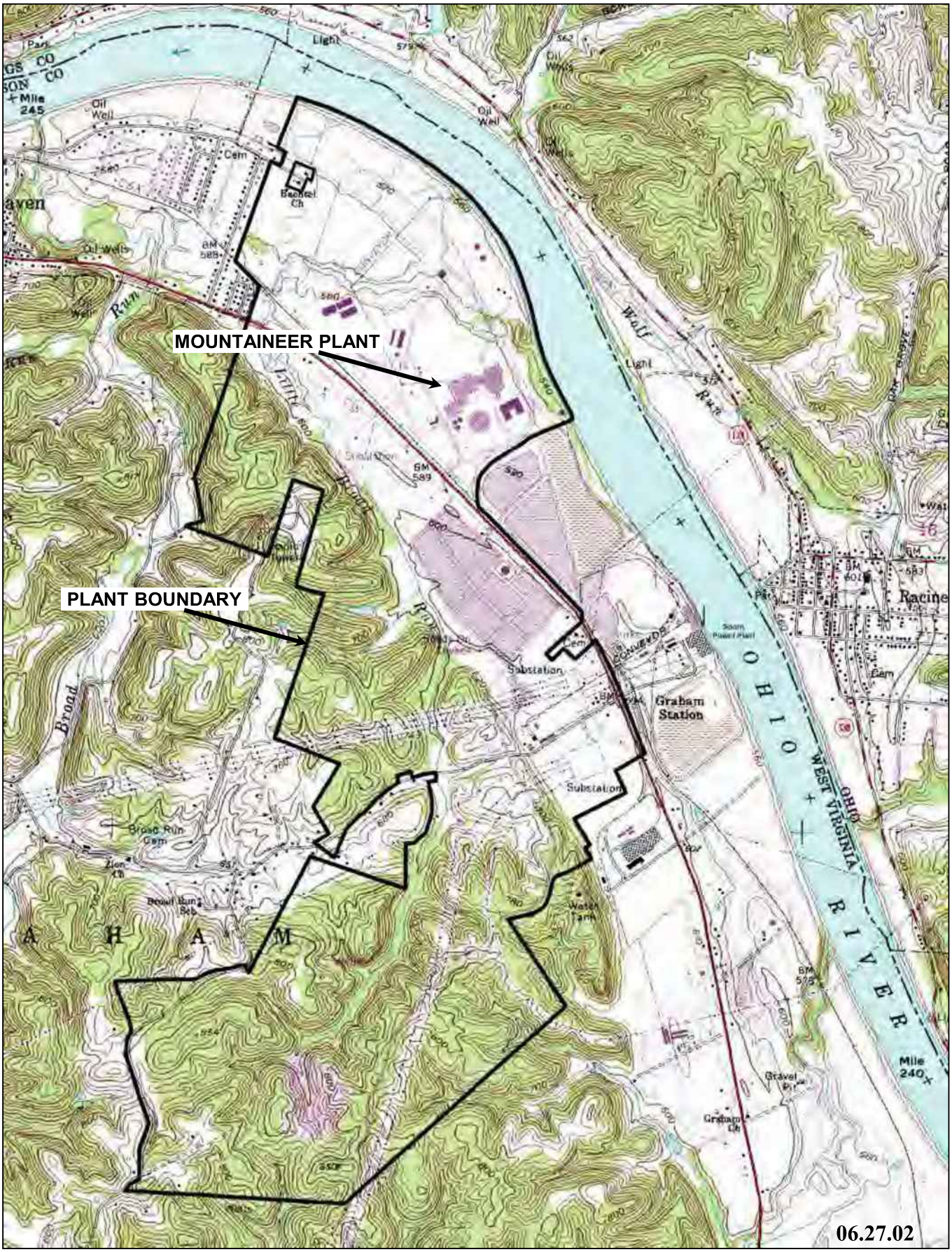
Attachment B

Plot Plans



N

New Haven, WVa-Ohio
Quadrangle
USGS Topographic Map

0 ½ 1mi

Appalachian Power Co.
Mountaineer Plant
Facility Boundary

Plant Latitude 38° 58' 46"
Plant Longitude 81° 56' 04"

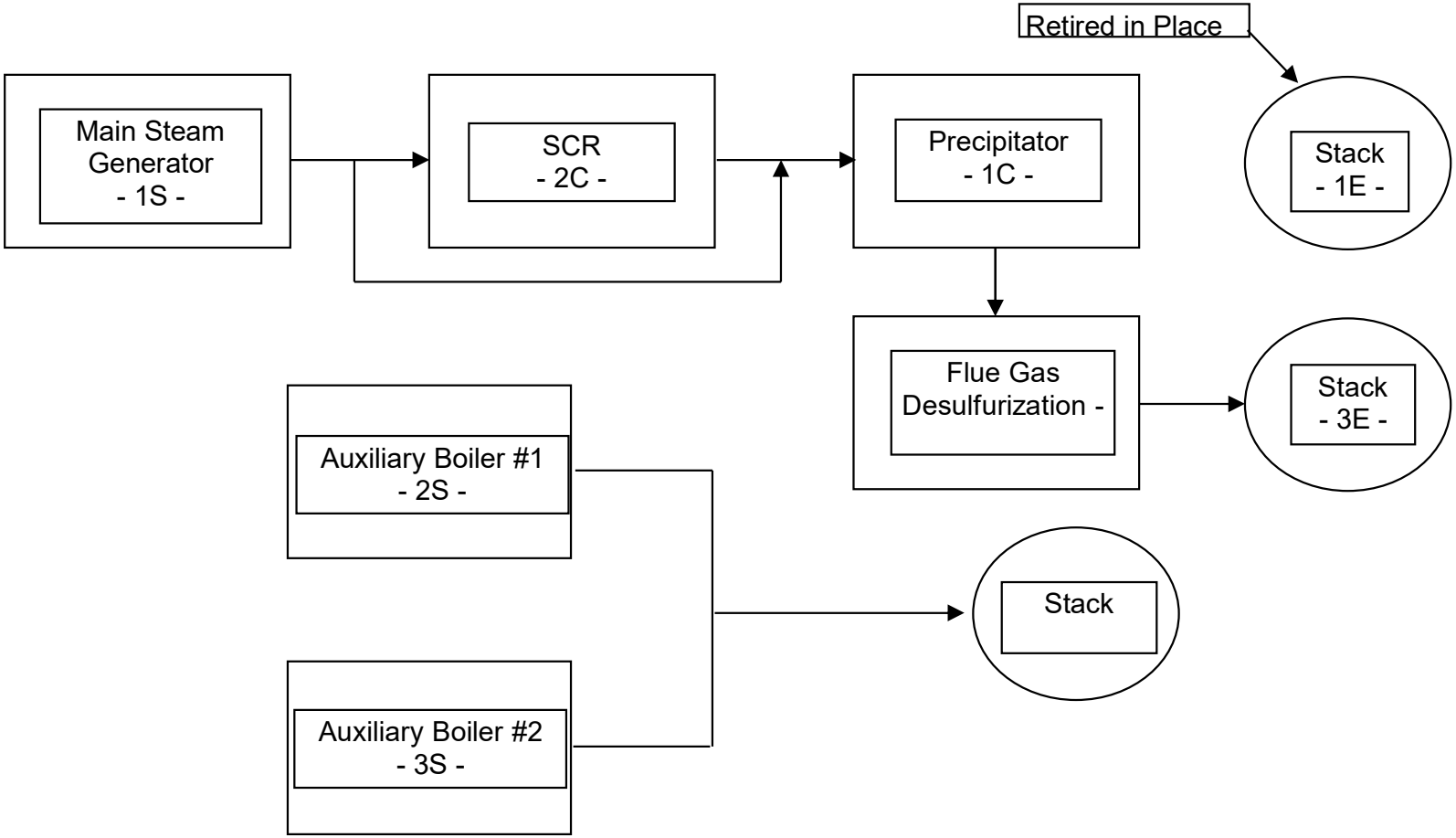
Air Quality Services AEP

Attachment C

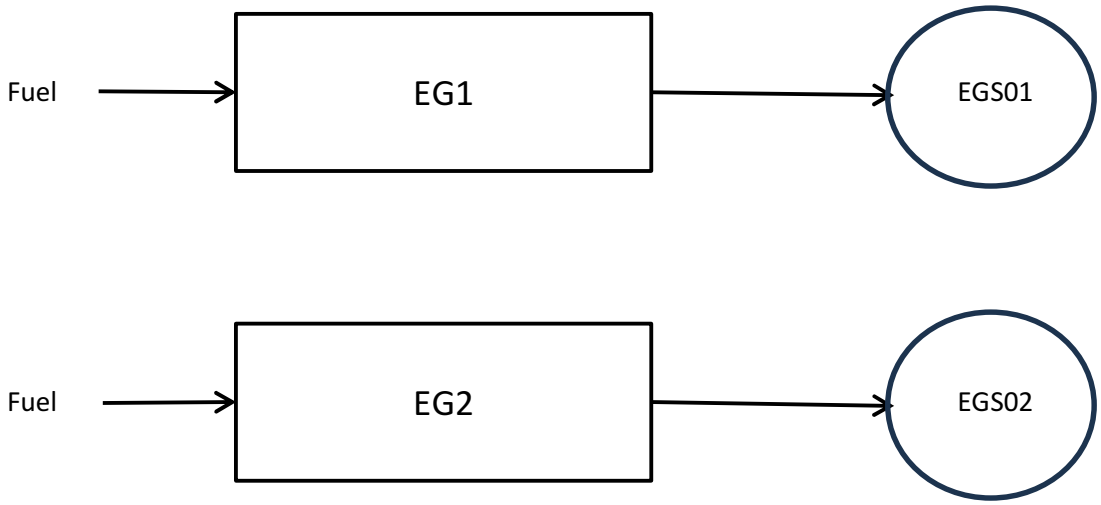
Process Flow Diagrams

Flow Diagrams

Steam Generator and Auxiliary Boilers



Mountaineer Plant
Emergency Generator Flow Diagram



Attachment D

Source Table and Equipment Table

ATTACHMENT D - Title V Equipment Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
Steam Generators, Boilers and Associated Equipment					
Unit 1 (1S)	MT1	Boiler: Babcock & Wilcox, Model # UP-108	1974	11960 mmBtu/hr	High efficiency ESP; LNB, SCR, FGD
Aux 1 (2S)	CS012	Auxiliary Boiler: Babcock & Wilcox, Model PFI-3171	1974	598 mmBtu/hr	N/A
Aux 2 (3S)	CS012	Auxiliary Boiler: Babcock & Wilcox, Model PFI-3171	1974	598 mmBtu/hr	N/A
Coal Handling System					
BU	BU	Barge Unloader (unload Barge onto Conveyor 1)	1974	4000 TPH	WS
Station 1	Sta-1	Conveyor 1 and Drop Points to Conveyor 15	1974	4000 TPH	PE, WS
C-15	C-15	Conveyor 15 (transfer to Station 5)	1974	4000 TPH	FE, MC
RCSU	RCSU	Rail Car Shaker Unloader (unload rail cars to Feeders F3N-1 through F3N-10	1974	3360 TPH	BH-CSH D1 BH-CSH D2
F3N-1, -2, -5, -6, -9, -10	F3N-1, -2, -5, -6, -9, -10	Feeders F3N-1, F3N-2, F3N-5, F3N-6, F3N-9, and F3N-10 and transfer points to Conveyor 3N	1974	300 TPH each	FE
F3N-3, -4, -7, -8	F3N-3, -4, -7, -8	Feeders F3N-3, F3N-4, F3N-7, and F3N-8, and transfer points to Conveyor 3N	1974	390 TPH each	FE
C-3N	C-3N	Conveyor 3N (Transfer to Station 3N)	1974	3000 TPH	FE
Station 3N	Station 3N	Drop point to Conveyor 3N5	1974	N/A	BH-CS3 D1, FE
C-3N5	C-3N5	Conveyor 3N5 (transfer to Station 5)	1974	3000 TPH	FE
Station 5	Sta-5	Conveyor 5 and Drop point to Coal Crushers or Conveyors 56S and 56N	1974	NA	BH-CS 5 D1, FE, WS
CR5-1, CR5-2	CR5-1, CR5-2	Coal Crushers	1974	4000 TPH each	WS
C-56S, C-56N	C-56S, C-56N	Conveyors 56S and 56N (transfer to Station 6)	1974	4000 TPH each	BH-CS 5 D1, WS
Station 6	Station 6	Drop Point to Conveyor 6S or to Conveyors 67S and/or 67N	1974	N/A	BH-DS 6 D1, FE, WS
C-6S	C-6S	Conveyor 6S (transfer to Radial Stacker 6S)	1974	3000 TPH	MC

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
RS-6S	RS-6S	Radial Stacker 6S (transfer to temporary Coal Storage Area #1	1974	3000 TPH	MC
C-67S/C-67N	C-67S/C-67N	Conveyors 67S and 67N (transfer to Stacker Reclaimer or to Station 7)	1974	4000/2500 TPH stacking/reclaiming	BH-CS 6 D1, BH-CS7 D4, PE, WS
SR-67SS	SR-67SS	Stacker-Reclaimer (Transfer coal to or recover coal from Storage Area #1 or Storage Area #2)	1974	4000/2500 TPH stacking/reclaiming	MC
CSA-1	CSA-1	Coal Storage Area #1	1974	21 Acres	N/A
CSA-2	CSA-2	Coal Storage Area #2	1974	21 Acres	N/A
F7N, F7S	F7N, F7S	Reclaim Hoppers/Feeders (Reclaim Area #1 Surge Pile)	1974	310 – 1800 TPH (variable) & 1345-1480 TPH fixed (each)	BH-CS 7S D1, BH-CS 7S D1A, FE
F67S	F67S	Reclaim Hoppers/Feeders (Reclaim Area #1 Surge Pile)	1974	2100 TPH	BH-CS 7S D1, FE
F7S-1 through F7S-10	F7S-1 through F7S-10	Reclaim Hoppers/Feeders (Reclaim Area #1 Surge Pile)	1974	300-1200 TPH (variable) (each)	BH-CS 7S D1, FE
C-7S	C-7S	Conveyor 7S (transfer to Station 7S)	1974	2000 TPH	BH-CS 7S D1, BH-CS 7S D2
Station 7S	Sta-7	Drop point to Conveyor 7S	1974	N/A	BH-CS 7S D2, FE
C-7S7	C-7S7	Conveyor 7S7 (transfer to Station 7 surge bin)	1974	2000 TPH	BH-CS 7S D2
Station 7	Sta-7	Drop Point to Conveyors 78S and/or 78N	1974	NA	BH-CS 7S D4, BH-CS8 D1, FE
C-78S, C-78N	C-78S, C-78N	Conveyors 78S and/or 78N (transfer to Station 8)	1974	2000 TPH (each)	BH-CS 8 D1
Station 8	Sta-8	Drop Point to Crusher or Conveyors 89E and /or 89W	1974	N/A	BH-CS 8 D1, FE, WS
CR8-1 & CR8-2	CR8-1 & CR8-2	Coal Crushers	1974	4000 TPH (each)	WS
C-89E, C-89W	C-89E, C-89W	Conveyors 89E and/or 89W (transfer to Station 9)	1974	2000 TPH (each)	BH-CS 8 D1, BH-CS 8 D2, BH-CS 9 D1, BH-CS 9 D2
Station 9	Sta-9	Drop point for Sample System and Conveyor 910 and/or 9B	1974	N/A	BH-CS 9 D2, FE
C-910	C-910	Conveyor 910 (transfer to Station 10)	1974	2000 TPH	BH-CS 9 D2, BH-CS 10 D1

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
C-9B	C-9B	Conveyor 9B (Transfer to Station B)	1974	2000 TPH	BH-CS 9 D2, BH-CS 9 D3, BH-CS B D1
Station B	Sta-B	Drop point to North Silos via various conveyors or to Station A and B Cross-tie Conveyor	1974	N/A	BH-CS B D1, FE
Station 10	Sta-10	Drop point to Conveyor 10A	1974	N/A	BH-CS 10 D1, FE
C-10A	C-10A	Conveyor 10A (transfer to Station A)	1974	2000 TPH	BH-CS 10 D1, BH-CS 10 D2, BH-CS A D1
Station A	Sta-A	Drop point to South Silos via various conveyors or to Station A and B Cross-tie Conveyor	1974	N/A	BH-CS A D1, FE
C-AB	C-AB	Station A and B Cross-tie Conveyor (reversible conveyor: transfer between Stations A and B)	1974	2000 TPH	BH-CS A D1, BH-CS B D1
~~C-M5~~	~~C-M5~~	~~Coal Conveyor M5~~ Remove from Permit – Conveyor Removed in 2022	~~2007~~	~~1800 TPH~~	~~BH-CS A D1, FE, WS, PE~~
Ash Handling System (System)					
1 ,2, 3, 4	1 ,2, 3, 4	Fly Ash Silos	1974	96,000 ft^3 each	RF, WC
1 through 6 and Pin Mixers 1 through 5	1 through 6 and Pin Mixers 1 through 5	Fly Ash Rotary Unloaders and Unloading Pin Mixers	Rotary Unloaders 1974, Pin Mixers 2016	300 TPH each unloader and 600 TPH per Pin Mixer	MC
Ash Handling System and Chloride Purge Stream Treatment System (12S)					
Haul Roads	Haul Roads	Chloride Purge Stream Wastewater Treatment Plant Sludge and Fly Ash Haul Roads	N/A	N/A	Water Truck
Miscellaneous Other					
Tank #1	Tank #1	Ignition Oil Tank	1974	1,500,000 gal	N/A
Tank #2	Tank #2	Ignition Oil Tank	1974	1,500,000 gal	N/A
Tank #4	Tank #4	C.H. Station Heating Oil	1990	5000 gal	N/A
Tank #5	Tank #5	C.H. Station Heating Oil	1990	5000 gal	N/A
Tank #6	Tank #6	Steam Cleaning Area – Diesel Tank	1974	275 gal	N/A
Tank #7	Tank #7	Gasoline Storage Tank	1990	2000 gal	N/A
Tank #9	Tank #9	10W Oil Tank	1974	1500 gal	N/A
Tank #10	Tank #10	15-40W Oil Tank	1974	1500 gal	N/A
Tank #11	Tank #11	10W Oil Tank	1974	1000 gal	N/A

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
Tank #12	Tank #12	30W Oil Tank	1974	1000 gal	N/A
Tank #13	Tank #13	Used Bulk Oil Tank	1990	8000 gal	N/A
Tank #14	Tank #14	Used Bulk Oil Tank	1990	1600 gal	N/A
Tank #15	Tank #15	Used Bulk Oil Tank	1990	1000 gal	N/A
Tank #16	Tank #16	C.H. Station Kerosene Tanks	1974	493 gal	N/A
Tank #17	Tank #17	NE FGD Building Heater Tank	2008	1000 gal	N/A
Tank #18	Tank #18	SE FGD Building Heater Tank	2008	1000 gal	N/A
Tank #19	Tank #19	W FGD Building Heater Tank	2008	2000 gal	N/A
Tank #22A & 22B	Tank #22A & 22B	Diesel Oil Storage Tanks (2)	1990	5000 gal each	N/A
Tank #23	Tank #23	Diesel Oil Storage at Limestone Area	2007	500 gal	N/A
Tank #24	Tank #24	#1 Fire Protection Pump Diesel Fuel Tank	2016	350 gal	N/A
Tank #25	Tank #25	#2 Fire Protection Pump Diesel Fuel Tank	2018	350 gal	N/A
Tank #26	Tank #26	Transmission Oil	1974	1000 gal	N/A
Tank #27	Tank #27	Pretreatment Sulfuric Acid	2001	16,500 gal	N/A
Tank #28	Tank #28	Pretreatment Caustic	1974	22,500 gal	N/A
Tank #29	Tank #29	Unit Caustic Vault	1974	12,000 gal	N/A
Tank #30	Tank #30	Metal Cleaning Waste	1985	1,500,000 gal	N/A
Tank #31	Tank #31	HEDP Near Cooling Tower	2012	1500 gal	N/A
Tank #32A & 32B	Tank #32A & 32B	Dispersant Near Cooling Tower	2012	1500 gal	N/A

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
Tank #33	Tank #33	Diethylene Glycol near Coal Handling Station 3N	1974	330 gal tote	N/A
Tank #34	Tank #34	Diethylene Glycol near Coal Handling Station 5	1974	330 gal tote	N/A
Tank #35	Tank #35	Diethylene Glycol near Coal Handling Station 6	1974	330 gal tote	N/A
Tank #36	Tank #36	Diethylene Glycol near Coal Handling Station 7	1974	330 gal tote	N/A
Tank #37	Tank #37	Diethylene Glycol near Coal Handling Station 8	1974	330 gal tote	N/A
Tank #38	Tank #38	Diethylene Glycol near Coal Handling Station 9	1974	330 gal tote	N/A
Tank #39	Tank #39	Diethylene Glycol near Coal Handling Station 10	2007	330 gal tote	N/A
Tank #40	Tank #40	Diethylene Glycol near Coal Stacker/Reclaimer	1974	330 gal tote	N/A
Tank #41	Tank #41	Diethylene Glycol near Coal Barge Unloader	1974	330 gal tote	N/A
Tank #42	Tank #42	Aqua Ammonia	1974	10,000 gal	N/A
Tank #43	Tank #43	CH Station 5 Heating Oil	1990	5000 gal	N/A
Tank #44	Tank #44	CH Station 7S Heating Oil	1990	5000 gal	N/A
Tank #45	Tank #45	CH Station 8 Heating Oil	1990	5000 gal	N/A
Tank #46	Tank #46	CH Station 9 Heating Oil	1990	5000 gal	N/A
Tank #47	Tank #47	CH Station 10 Heating Oil	1990	5000 gal	N/A
Tank #48	Tank #48	CH Station 3N Heating Oil	2016	5000 gal	N/A
Tank #50	Tank #50	Ignition Fuel Oil Drain Receiver	1974	2000 gal	N/A
Tank #51	Tank #51	Ignition Oil Pump Skid Drainage Collection Tank	1974	3000 gal	N/A
Tank #52	Tank #52	Main Turbine Lubricating Oil Tank	1974	25,000 gal	N/A
Tank #53	Tank #53	Urea Mix Tank	2003	3300 gal	N/A
Tank #54	Tank #54	Urea Mix Tank	2003	3300 gal	N/A

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
Tank #55	Tank #55	Mix Water Tank	2003	94,200 gal	N/A
Tank #56	Tank #56	Urea Storage Tank	2003	140,800 gal	N/A
~~Tank #57~~	~~Tank #57~~	~~SO_3 Mitigation Hydrated Lime Silo~~ This is the same piece of equipment as Tank 59	~~Not Yet Installed~~	~~N/A~~	~~BH~~
Tank #58 (8S)	Tank #58	SO_3 Mitigation Magnesium Hydroxide	Not Yet Installed	N/A	N/A
Tank #59 (10 S or 11S)	Tank #59	SO_3 Mitigation Trona or Hydrated Lime Silo	2007	430 Tons	BH
Tank #60 (12S)	Tank #60	CPS WWTP Hydrated Lime Silos (2)	2007	83 Tons (each)	BH
~~Tank #61 (12S)~~	~~Tank #61~~	~~CPS WWTP Ferric Chloride~~ Remove from permit. Tank removed in 2022.	~~2007~~	~~8800 gal~~	~~N/A~~
Tank #62 (14~~12~~S)	Tank #62	CPS WWTP Hydrochloric Acid	Not Yet Installed	N/A	N/A
Tank #63 (13~~12~~S)	Tank #63	CPS WWTP Sulfuric Acid	2007	10,600 gal	N/A
Tank #65	Tank #65	Gypsum Transfer Station #5 Heating Oil Tank	2007	1000 gal	N/A
Tank #66	Tank #66	Gypsum Transfer Station #6 Heating Oil Tank	2007	500 gal	N/A
Tank #67	Tank #67	Gypsum Transfer Station #7 Heating Oil Tank	2007	500 gal	N/A
Tank #68	Tank #68	Gypsum Transfer Station #8 Heating Oil Tank	2007	1000 gal	N/A
Tank #69	Tank #69	Gypsum Transfer Station #9 Heating Oil Tank	2007	1000 gal	N/A
Tank #70	Tank #70	Gypsum Transfer Station #10 Heating Oil Tank	2007	1000 gal	N/A
Tank #71	Tank #71	Gypsum Transfer Station G-1 Diethylene Glycol Tank	2007	330 gal Tote	N/A
Tank #72	Tank #72	Gypsum Transfer Station E-Crane Hopper Diethylene Glycol Tank	2007	250 gal Tote	N/A
Tank #73	Tank #73	Gypsum Transfer Station G-6 Diethylene Glycol Tank	2007	330 gal Tote	N/A
Tank #74	Tank #74	Gypsum Transfer Station G-7 Diethylene Glycol Tank	2007	330 gal Tote	N/A
Tank #75	Tank #75	Gypsum Transfer Station G-8 Diethylene Glycol Tank	2007	330 gal Tote	N/A

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
Tank #76	Tank #76	Gypsum Transfer Station G-9 Diethylene Glycol Tank	2007	330 gal Tote	N/A
Tank #77	Tank #77	Limestone Transfer Station E-Crane Hopper Diethylene Glycol Tank	2007	330 gal Tote	N/A
Tank #78	Tank #78	Gypsum Transfer Station G-11 (Stacker) Diethylene Glycol Tank	2007	330 gal Tote	N/A
Tank #79	Tank #79	Metclear at CPS	2007	1500 gallons	N/A
Tank #80	Tank #80	Metclear at ~~Bottom Ash~~ Water Treatment Pond Complex	2010	1500 gallons	N/A
Tank #81	Tank #81	Klaraid at ~~Bottom Ash~~ Water Treatment Pond Complex	2010	1500 gallons	N/A
Tank #82	Tank #82	Bleach Storage	2016	8400 gallons	N/A
Tank #83	Tank #83	Nutrient Tank at Bioreactor	2011	12,770 gallons	N/A
Tank #84	Tank #84	Diethylene Glycol near Coal Equipment Refuel Shed	2007	330 gal Tote	N/A
Tank #85	Tank #85	Diethylene Glycol near Coal Rail Car Unloader	2007	330 gal Tote	N/A
Tank #86	Tank #86	CPS WWTP Coagulant	2007	330 gal Tote	N/A
Tank #87	Tank #87	CPS WWTP Flocculant	2007	330 gal Tote	N/A
Tank #88	Tank #88	CPS WWTP Anti-Foaming Agent	2007	330 gal Tote	N/A
Tank #89	Tank #89	CPS WWTP Biocide	2007	330 gal Tote	N/A
Limestone Handling System					
Limestone Barge Unloading to Storage (5S)					
BUC-01	ZU-CN-70001	Limestone/Gypsum Unloading Crane	2007	1500 TPH	
HOP-20	ZU-QQ-70002	Limestone Unloading Hopper	2007	1500 TPH	WS
F-20	ZU-CV-70001	Limestone Unloading Feeder	2007	1500 TPH	PE, MC
STA-15	STA-15	Limestone Transfer Station 1	2007	1500 TPH	WS, TE
C-21	ZU-CV-70002	Limestone Stackout Conveyor	2007	1500 TPH	PE, MC, TC

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
SP-10	SP-10	Limestone Active Stockpile	2007	15,000 Tons	MC
SP-11	SP-11	Limestone Long-Term Stockpile	2007	68,000 Tons	MC
Limestone Processing System (7S)					
HOP-3	HOP-3	Frozen Limestone Reclaim Hopper	2009	40 Tons Capacity	
FL3-3	FL3-3	Frozen Limestone Reclaim Conveyor	2009	350 TPH	FE
CRL-3 (7S)	CRL-3	Frozen Limestone Crusher/Breaker	2009	350 TPH	FE
F21-A	ZU-CV-70003	Limestone Reclaim Feeder A	2007	400 TPH	FE, TE
F21-B	ZU-CV-70004	Limestone Reclaim Feeder B	2007	400 TPH	FE, TE
STA-17	ZU-QQ-70006	Limestone Transfer Chutes 3A	2007	400 TPH	WS, TE
STA-18	ZU-QQ-70007	Limestone Transfer Chutes 3B	2007	400 TPH	WS, TE
C -22	ZU-CV-70005	Limestone Reclaim Conveyor	2007	400 TPH	PE, MC
STA-20	STA-20	Limestone Transfer Station 4	2007	400 TPH	CF, TE
C-24	ZU-CV-70006	Limestone Plant Feed Conveyor	2007	400 TPH	PE, MC
STA-21	STA-21	Limestone Transfer Station 6	2007	400 TPH	TE, BH
C-25	ZU-CV-70007	Limestone Silo Feed Conveyor	2007	400 TPH	TE, BH
STA-22	STA-22	Limestone Transfer Station 7	2007	400 TPH	TE, BH
SIL-10A	SIL-10A	Limestone Day Bin 01	2007	1500 Tons	BH
SIL-10B	SIL-10B	Limestone Day Bin 02	2007	1500 Tons	BH
HOP-21	ZU-QQ-70014	Emergency Loading Hopper	2007	16 Tons	MC
F-22	ZU-CV-70008	Emergency Limestone Transfer	2007	200 TPH	FE
STA-24	STA-24	Limestone Transfer Station 8	2007	200 TPH	FE

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
C-28	ZU-CV-70009	Emergency Bucket Conveyor	2007	200 TPH	FE
STA-25	STA-25	Limestone Transfer Station 9	2007	200 TPH	FE
		Vibrating Bin Discharger (2)	2007	86.7 TPH (each)	TE, MC
		Limestone Weight Feeder (2)	2007	86.7 TPH (each)	TE, BH, MC
		Wet Ball Mill (2)	2007	86.7 TPH (each)	TE, MC, WS
Gypsum Handling System					
Gypsum Material Handling System (6S)					
STA-26	STA-26	Gypsum Discharge from Belt Filter A	2007	160 TPH	MC, FE
STA-27	STA-27	Gypsum Discharge from Belt Filter B	2007	160 TPH	MC, FE
STA-28	STA-28	Gypsum Discharge from Belt Filter C	2007	160 TPH	MC, FE
C-30	ZB-CV-70009	Gypsum Filter Discharge Conveyor	2007	450 TPH	MC, FE
STA-29	STA-29	Transfer Station	2007	450 TPH	MC, FE
C-31	ZB-CV-70010	Gypsum Transfer Tripper Conveyor	2007	450 TPH	MC, FE
STA-30	STA-30	Transfer Station	2007	450 TPH	MC, FE
SP-12	SP-12	Gypsum Pile	2007	12,000 Tons	MC, FE
STA-26 A	STA-26 A	Alternative Gypsum Discharge From Belt Filter A	2007	160 TPH	MC, FE
STA-27 A	STA-27 A	Alternative Gypsum Discharge From Belt Filter B	2007	160 TPH	MC, FE
STA-28 A	STA-28 A	Alternative Gypsum Discharge From Belt Filter C	2007	160 TPH	MC, FE
BK-10	BK-10	Emergency Discharge Bunker	2007	200 Tons	MC, FE
STA-37	STA-37	Transfer Tower #3	2007	1500 TPH	MC, FE

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
C-35	ZB-CV-70011	Gypsum Loadout Conveyor	2007	1500 TPH	MC, FE
BL-01	STA-38	Barge Loadout	2007	1500 TPH	MC
HOP-30	ZB-QQ-70002	Gypsum Unloading Hopper	2007	100 Tons	WS
F-30	ZB-CV-70001	Gypsum Unloading Feeder	2007	1500 TPH	WS, MC, FE
STA-39	STA-39	Transfer Station	2007	1500 TPH	MC, FE
C-39	ZB-CV-70002	Waste Gypsum Transfer Conveyor	2007	1500 TPH	MC, FE
STA-40	STA-40	Transfer Tower #4	2007	1500 TPH	MC, FE
C-40	ZB-CV-70003	Gypsum Overland Conveyor #1	2007	1500 TPH	MC, FE
STA-41	STA-41	Transfer Tower #6	2007	1500 TPH	MC, FE
C-41	ZB-CV-70004	Gypsum Overland Conveyor #2	2007	1500 TPH	MC, FE
STA-42	STA-42	Transfer Tower #7	2007	1500 TPH	MC, FE
C-42	ZB-CV-70005	Gypsum Overland Conveyor #3	2007	1500 TPH	MC, FE
STA-43	STA-43	Transfer Tower #8	2007	1500 TPH	MC, FE
C-43	ZB-CV-70006	Gypsum Overland Conveyor #4	2007	1500 TPH	MC, FE
STA-44	STA-44	Transfer Tower #9	2007	1500 TPH	MC, FE
C-44	ZB-CV-70007	Gypsum Overland Conveyor #5	2007	1500 TPH	MC, FE
STA-45	STA-45	Transfer Tower #10	2007	1500 TPH	MC, FE
C-45	ZB-CV-70008	Waste Gypsum Radial Stacker	2007	1500 TPH	MC, FE
STA-46	STA-46	Gypsum Discharge Telescoping Chute	2007	1500 TPH	MC, FE
Pile	Pile	Landfill Staging Pile	2007	20,000 Tons	

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
Emergency Diesel Generators and Diesel Storage Tanks (16S)					
EGS01	EG-1	Caterpillar CAT 3516-HD TA	2014	3003 bhp	N/A
EGS02	EG-2	Caterpillar CAT 3516-HD TA	2014	3003 bhp	N/A
EGT01	EGT01	Diesel Storage Tank	2014	4800 gallons	N/A
EGT02	EGT02	Diesel Storage Tank	2014	4800 gallons	N/A
Emergency Fire Pumps (17S)					
17S	17E	Two (2) Cummins CFP9E-F30 Diesel Engines for Emergency Fire Water System Pumps	2017	308 bhp each	N/A

[1]For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

Attachment E

Emission Unit Forms

ATTACHMENT E - Emission Unit Form

***Emission Unit Description*: Steam Generator #1**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** ESP, SCR, FGD, LNB
1S	Steam Generator #1	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
This is a universal pressure coal-fired steam generator providing steam to a turbine/generator set to produce electricity.

Manufacturer:	**Model number:**	**Serial number:**
Babcock and Wilcox	UP-108	N/A
Construction date:	**Installation date:**	**Modification date(s):**
1974	1979	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Nominal – 11,960 mmBTU/hr
This heat input value is for operation at the nominal boiler rating. Boiler design enables the boiler to be operated above the nominal rated capacity.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal Hourly Throughput is 9,775,000 lb/hr steam.	104,769,600 mmBTU Heat Input	8760 hrs/year

***Fuel Usage Data* (fill out all applicable fields)**

Does this emission unit combust fuel? _X_ Yes ___ No	**If yes, is it?** _X_ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: 13,424 mmBTU/hr (Rating use to model full load operation for FGD Permit Determination.)	**Type and Btu/hr rating of burners:** B&W Low NOx Burner

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
This steam generator will burn coal, both eastern bituminous and western subbituminous, and utilize fuel oil for startup/shutdown and for flame stabilization. Other materials burned include non-hazardous water treatment resins, chemical cleaning solution, on-spec used oil, etc.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Bituminous Coal	7.5 lb/mmBTU SO2	18%	13,000 BTU/lb
Subbituminous Coal	1% Sulfur	18%	9,100 BTU/lb
Fuel Oil	1% Sulfur	Trace	148,000 BTU/gal

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	427	1,870
Nitrogen Oxides (NO_X)	10,514	46,051
Lead (Pb)	0.39	1.73
Particulate Matter ($PM_{2.5}$)	179	786
Particulate Matter (PM_{10})	138	603
Total Particulate Matter (TSP)	598	2,620
Sulfur Dioxide (SO_2)	18,024	78,945
Volatile Organic Compounds (VOC)	51	224
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Arsenic	0.44	1.93
Beryllium	0.03	0.11
Chromium	0.41	1.81
Cobalt	0.12	0.55
Manganese	0.50	2.19
Mercury	0.07	0.32
Nickel	0.36	1.56
Selenium	1.13	4.94
Hydrogen Chloride	1041.60	4562.21
Hydrogen Fluoride	130.20	570.28
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Regulation 13 Permit R13-0075I - Condition 4.1.1; Condition 4.1.2; Condition 4.1.21

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Conditions 4.0.1 through 4.0.2;
Conditions 4.1.1 through 4.1.14; and
Conditions 4.1.33 through 4.1.40.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Regulation 13 Permit R13-0075I - Conditions 4.2.2; Section 4.4

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Condition 4.2.1;
Conditions 4.2.3 through 4.2.5;
Condition 4.2.7;
Conditions 4.2.9 through 4.2.21;
Conditions 4.3.1 through 4.3.18;
Conditions 4.4.1 through 4.4.4;
Conditions 4.4.10 through 4.4.18;
Conditions 4.5.1 through 4.5.7;
Conditions 4.5.11 through 4.5.17.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

***Emission Unit Description*: Auxiliary Boiler #1**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit: N/A**
2S	**Auxiliary Boiler #1**	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
This oil fired boiler is a non-EGU that provides steam to the main unit for startup, operations during maintenance outages and also to the plant heating system when the main unit is out of service for maintenance.

Manufacturer:	**Model number:**	**Serial number:**
Babcock and Wilcox	PFI 28-28	Custom
Construction date:	**Installation date:**	**Modification date(s):**
1974	1979	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Nominal – 600 mmBTU/hr
This heat input value is for operation at the nominal boiler rating. Boiler design enables the boiler to be operated above the nominal rated capacity.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal Hourly Throughput is 375,000 lb/hr steam.	3,285,000,000 lb of steam	8760 hrs/year

***Fuel Usage Data* (fill out all applicable fields)**

Does this emission unit combust fuel? _X_ Yes ___ No	**If yes, is it?** _X_ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
This steam generator will burn fuel oil for startup/shutdown and for operation.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Fuel Oil	1% Sulfur	Trace	148,000 BTU/gal

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	28	12.3	
Nitrogen Oxides (NO_X)	113	49.2	
Lead (Pb)	0.005	0.00	
Particulate Matter ($PM_{2.5}$)	1.40	0.6	
Particulate Matter (PM_{10})	6	2.5	
Total Particulate Matter (TSP)	11.23	4.9	
Sulfur Dioxide (SO_2)	398.8	174.7	
Volatile Organic Compounds (VOC)	1.12	0.5	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Arsenic	0.002	0.00	
Beryllium	0.002	0.00	
Chromium	0.002	0.00	
Manganese	0.004	0.00	
Mercury	0.002	0.00	
Nickel	0.002	0.00	
Selenium	0.009	0.00	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emission estimates are based on a combination of regulatory limitations, use of AP-42 emission factors, and operational and engineering knowledge.

The PTE includes limiting the Auxiliary Boilers to 10% capacity by heat input.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Regulation 13 Permit R13-0075I: Condition 4.1.3; Condition 4.1.5; Conditions 4.1.22 through 4.1.24

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Conditions 4.0.1 through 4.0.2;
Condition 4.1.1;
Conditions 4.1.15 through 4.1.26; and
Conditions 4.1.30 through 4.1.32.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Regulation 13 Permit R13-0075I: Conditions 4.2.2; Section 4.4

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Condition 4.2.2;
Conditions 4.2.5 through 4.2.6;
Condition 4.2.8;
Conditions 4.4.1 through 4.4.2;
Conditions 4.4.6 through 4.4.9;
Condition 4.5.2 through 4.5.4; and
Conditions 4.5.8 through 4.5.10.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

***Emission Unit Description*: Auxiliary Boiler #2**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit: N/A**
3S	**Auxiliary Boiler #2**	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
This oil-fired boiler is a non-EGU that provides steam to the main unit for startup, operations during maintenance outages and also to the plant heating system when the main unit is out of service for maintenance.

Manufacturer:	**Model number:**	**Serial number:**
Babcock and Wilcox	PFI 28-28	Custom
Construction date:	**Installation date:**	**Modification date(s):**
1974	1979	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Nominal – 600 mmBTU/hr
This heat input value is for operation at the nominal boiler rating. Boiler design enables the boiler to be operated above the nominal rated capacity.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal Hourly Throughput is 375,000 lb/hr steam.	3,285,000,000 lb. of steam	8760 hrs/year

***Fuel Usage Data* (fill out all applicable fields)**

Does this emission unit combust fuel? _X_ Yes ___ No	**If yes, is it?** _X_ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
This steam generator will burn fuel oil for startup/shutdown and for operation.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Fuel Oil	1% Sulfur	Trace	148,000 BTU/gal

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	28	12.3	
Nitrogen Oxides (NO_X)	113	49.2	
Lead (Pb)	0.005	0.00	
Particulate Matter ($PM_{2.5}$)	1.41	0.6	
Particulate Matter (PM_{10})	6	2.5	
Total Particulate Matter (TSP)	11.23	4.9	
Sulfur Dioxide (SO_2)	398.8	174.7	
Volatile Organic Compounds (VOC)	1.12	0.5	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Arsenic	0.002	0.00	
Beryllium	0.002	0.00	
Chromium	0.002	0.00	
Manganese	0.004	0.00	
Mercury	0.002	0.00	
Nickel	0.002	0.00	
Selenium	0.009	0.00	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emission estimates are based on a combination of regulatory limitations, use of AP-42 emission factors, and operational and engineering knowledge. The PTE includes limiting the Auxiliary Boilers to 10% capacity by heat input.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Regulation 13 Permit R13-0075I:
Condition 4.1.4;
Condition 4.1.5; and
Conditions 4.1.22 through 4.1.24.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Conditions 4.0.1 through 4.0.2;
Condition 4.1.1;
Conditions 4.1.15 through 4.1.26; and
Conditions 4.1.30 through 4.1.32.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Regulation 13 Permit R13-0075I:
Condition 4.2.2; and
Section 4.4

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Condition 4.2.2;
Conditions 4.2.5 through 4.2.6;
Condition 4.2.8;
Conditions 4.4.1 through 4.4.2;
Conditions 4.4.6 through 4.4.9;
Conditions 4.5.2 through 4.5.4; and
Conditions 4.5.8 through 4.5.10.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

***Emission Unit Description*:** Limestone Material Handling System

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** Conveyor covers, partial and full enclosures, telescoping chute, compaction
5S	Limestone Material Handling System	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

This system consists of the e-crane barge unloader, chutes, feeders, conveyors, and storage pile for limestone.

Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	Custom
Construction date:	**Installation date:**	**Modification date(s):**
2005	2007	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Nominal – 1000 ton/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal – 1000 ton/hr	1,092,000 tons	8760 hrs/year

***Fuel Usage Data* (fill out all applicable fields)**

Does this emission unit combust fuel? _ _Yes __X _ No	**If yes, is it?** N/A _ _ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxides (NO_X)	N/A	N/A
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	1.62	1.21
Particulate Matter (PM_{10})	11.64	8.12
Total Particulate Matter (TSP)	32.71	18.47
Sulfur Dioxide (SO_2)	N/A	N/A
Volatile Organic Compounds (VOC)	N/A	N/A
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emission estimates are based on a combination of existing permit limitations, regulatory limitations, use of AP-42 emission factors, and operational and engineering knowledge.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Regulation 13 Permit R13-0075I:
Condition 4.1.7;
Condition 4.1.16; and
Condition 4.1.21

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Conditions 6.1.2 through 6.1.3.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Regulation 13 Permit R13-0075I:
Condition 4.2.4;
Condition 4.2.12; and
Conditions 4.4.1 through 4.4.3

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Condition 6.4.2.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Limestone Handling

Limestone will be delivered to the Mountaineer Plant site in river barges having capacities of 1500 ton. New barge docking river cells will be installed parallel to the shoreline near the SCR barge facility to store the incoming and outgoing fleet of limestone barges. Additionally, a pair of new cells for unloading and maneuvering the fleet will be installed and will separate the full and empty fleet. A barge haul system will be installed to position the barges for unloading. The limestone barge unloading equipment, consisting of a 1,500-ton per hour clamshell crane unloader, a 100-ton hopper and 60-inch wide belt feeder will be mounted on the two new larger diameter river cells.

Limestone will be transferred from the clamshell equilibrium crane unloader to the fixed, cell mounted hopper. The hopper will discharge onto a belt feeder that will feed the tail end of the 42-inch wide Limestone Unloading Conveyor. Dust will be controlled at the barge unloading operation (hopper area) using a dry fog dust suppression system. Nozzles will be mounted around the top of the unloading hopper generating fog to keep any dust generated by dropping the limestone into the hopper, inside the hopper. Further, the unloading conveyor will utilize ¾ covers to minimize any dust caused by the wind.

The unloading conveyor will convey the limestone to the active/long-term storage area creating the Limestone Stockpile. The conical pile (considered active capacity) will be uncovered and have a total capacity of approximately 7 days, to match the capacity of the delivered barges per week. The center (gravity) draw down capacity will allow up to two barges to be unloaded and delivered to the center of the pile to replace the previous days consumption. The long–term (inactive) limestone pile will have a capacity of approximately 20-days and will be located next to the short-term (active) limestone pile. The long-term pile will be constructed by removing limestone from the conical pile with mobile equipment to place material and shape the pile as shown in the drawings. Dust generated by creating the Limestone Stockpile will be controlled using telescopic discharge chute, and the unloading conveyor will utilize ¾ covers over the belt.

Equipment I.D.	Description	Average Capacity	Maximum Capacity	Fug. Emission Controls
ZU QQ 70001	Limestone Unloading Crane	1381 TPH	1531 TPH	
ZU QQ 70002	Limestone Unloading Hopper	1000 TPH	1500 TPH	WS
ZU CV 70001	Limestone Unloading Feeder	1500 TPH	1700 TPH	PE, MC
STA-15	Limestone Transfer Station 1	1500 TPH	1700 TPH	, TE
ZU CV 70002	Limestone Unloading Conveyor	750 TPH	1700 TPH	PE, MC, TC
SP-10	Limestone Active Stockpile		15,000 Tons	MC
SP-11	Limestone Long-Term Stockpile		44,400 Tons	MC

Controls Used throughout the system descriptions: Partial Covers = PE; Fully Enclosed = FE; Bag house = BH; Moisture Content = MC; Fogging System = WS; Telescoping Chute = TC; Building Enclosure = TE

Emergency Limestone Supply System

An alternate limestone supply to the limestone silos has been designed into the Mountaineer project. The alternate supply system is used when the conveying system is out of service for maintenance or repair. The system consists of a hopper to receive limestone deliveries from a front end loader. The hopper discharges onto a feeder belt to transfer the limestone to a vertical belt conveyor. The vertical belt conveyor transfers the limestone directly into either South Limestone Day Bin or North Limestone Day Bin through chutes at the outer perimeter of the silo shell.

Equipment I.D.	Description	Average Capacity	Maximum Capacity	Fug. Emission Controls
ZU QQ 70014	Emerg. Limestone Hopper		16 Ton	MC
ZU CV 70008	Emerg. Limestone Feeder	200 TPH	200 TPH	FE
STA-24	Limestone Transfer Station	200 TPH	200 TPH	FE
ZU CV 70009	Emerg. Vertical Belt Conveyor	200 TPH	200 TPH	FE
STA-25	Limestone Transfer Station	200 TPH	200 TPH	FE

ATTACHMENT E - Emission Unit Form

***Emission Unit Description*:** Gypsum Material Handling System

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
6 S	Gypsum Material Handling System	Conveyor covers, partial and full enclosures, telescoping chute, Moisture content of gypsum.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
This system consists of the barge unloader, chutes, feeders, conveyors, and storage pile for gypsum.

Manufacturer:	**Model number:**	**Serial number:**
Custom	Custom	N/A

Construction date:	**Installation date:**	**Modification date(s):**
2005	January 29, 2007	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Conveyor Transfer Rate (Nominal) – 1700 ton/hr.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal – 1700 ton/hr	4,026,000 tons	8760 hrs/year

***Fuel Usage Data* (fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** N/A __ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxides (NO_X)	N/A	N/A
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	43.98	44.50
Particulate Matter (PM_{10})	66.7	67.3
Total Particulate Matter (TSP)	295.9	299.4
Sulfur Dioxide (SO_2)	N/A	N/A
Volatile Organic Compounds (VOC)	N/A	N/A
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emission estimates are based on a combination of existing permit limitations, regulatory limitations, use of AP-42 emission factors, and operational and engineering knowledge.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Regulation 13 Permit R13-0075I:
Conditions 4.1.9 through 4.1.11;
Conditions 4.1.16 through 4.1.17; and
Condition 4.1.21.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Conditions 7.1.1 through 7.1.4 and
Condition 7.1.9.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Regulation 13 Permit R13-0075I:
Conditions 4.2.6 through 4.2.8;
Conditions 4.2.12 through 4.2.13; and
Conditions 4.4.1 through 4.4.3

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Conditions 7.4.1 through 7.4.4 and
Condition 7.4.9.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

FGD Gypsum Handling for Sale and Disposal

At the Mountaineer facility, gypsum is created as the by-product of the WFGD process. The gypsum will be collected from the three vacuum belt filters that will discharge onto the 30-inch Gypsum Filter Discharge Conveyor. The discharge conveyor will be located inside the dewatering building and will convey the material to the outside the building and onto a 30-inch Gypsum Transfer Tripper Conveyor. The transfer tripper conveyor will carry the material to the Transfer Tower #5. In this tower, the gypsum will be directed for disposal by placement into the landfill or by loading onto barges for sale. The Gypsum Tripper Conveyor will also be used to create the Emergency Gypsum Stockpile. The stockpile will be a 3-day, cone shaped pile to store the gypsum prior to disposal. At the stockpile, the gypsum will be reclaimed using an end-loader to load trucks to haul the waste gypsum to the landfill when the overland conveyor is not operating due to emergency maintenance.

As an alternative, the discharge from the vacuum belt filters can be directed to the emergency discharge bunker. The gypsum will be reclaimed using an end-loader to load trucks to haul the waste gypsum to the landfill or off site to a purchaser.

Each of the gypsum conveyors will incorporate ¾ covers to minimize the production of dust in the conveying operations.

Equipment I.D.	Description	Average Capacity	Maximum Capacity	Fug. Emission Controls
STA-26	Gypsum Discharge from Belt Filter A	85 TPH	165.3 TPH	MC, FE
STA-27	Gypsum Discharge from Belt Filter B	85 TPH	165.3 TPH	MC, FE
STA-28	Gypsum Discharge from Belt Filter C	85 TPH	165.3 TPH	MC, FE
ZB CV 70009	Gypsum Filter Discharge Conveyor	160 TPH	250 TPH	MC, PE
STA-29	Transfer Tower 1	160 TPH	250 TPH	MC, FE
ZB CV 70010	Gypsum Transfer Tripper Conveyor	160 TPH	250 TPH	MC, PE
SP-12	Gypsum Pile		12,000 tons	MC,
STA-26 A	Alternative Gypsum Discharge from Belt Filter A	85 TPH	165.3 TPH	MC, FE
STA-27 A	Alternative Gypsum Discharge from Belt Filter B	85 TPH	165.3 TPH	MC, FE
STA-28 A	Alternative Gypsum Discharge from Belt Filter C	85 TPH	165.3 TPH	MC, FE
C-35	Gypsum Filter Emergency Bunker			MC, FE

Transfer of Mountaineer Gypsum to Barges for Sale

Gypsum from the WFGD process can be directly stockpiled, sent to the landfill or transferred to river barges for sale to wallboard facilities. A loadout facility will be incorporated near the coal barge mooring area. A tug boat will assist the positioning of the empty barges out of storage to the loading cells and assist the positioning of the full barges into storage. A barge haul system will consist of a two-winch hoist, several pulleys and cable will be used to control barge movement. The cable from each hoist will be tied to opposite ends of the barge. One hoist will give cable while the other hoist reels in pulling the barge one way or the other.

The Gypsum is directed to the river loadout system in Transfer Tower 5. The gypsum diverted to the barge loadout system flows onto a gypsum loadout conveyor. The loadout conveyor will feed the gypsum to a loadout system that consists of a telescoping and rotating chute that can feed the material to barges while minimizing dust production. Each of the gypsum conveyors will incorporate ¾ covers to minimize the production of dust in the conveying operations.

Equipment I.D.	Description	Average Capacity	Maximum Capacity	Fug. Emission Controls
STA-37	Transfer Tower #5		1700 TPH	MC, FE
ZB CV 70011	Gypsum Loadout Conveyor		1700 TPH	MC, PE
BL-01	Barge Loadout		1700 TPH	MC

Barged Gypsum to Disposal

At the Mountaineer facility, a barge unloading and disposal system will be available for disposing of gypsum from other AEP facilities. Limestone for the flue gas desulfurization system and gypsum for disposal in the landfill will be delivered to the Mountaineer Plant site in river barges having capacities of 1500 tons. The barge unloading equipment consists of a 1500 ton per hour clamshell equilibrium type crane unloader (common for use with the limestone) that will be directly mounted on the river cell. The clamshell unloader will place the gypsum in a 100-ton gypsum unloading hopper which will be mounted on top of an adjacent river cell. A belt feeder and unloading conveyor located under the hopper will transfer the material from the river barges to the shore. Gypsum from the river barges is conveyed at a rate of 1500 tph directly to the landfill via the 48-inch Waste Gypsum Transfer Conveyor ending at Gypsum Transfer Tower #4. The gypsum is then transferred onto the 48-inch Gypsum Overland Conveyor No. 1 as it begins the trip to the landfill. This conveyor also receives gypsum from the belt filters in Transfer Tower 5.

Dust will be controlled at the barge unloading operation (hopper area) using a dry fog dust suppression system. Nozzles will be mounted around the top of the unloading hopper generating fog to keep any dust generated by dropping the gypsum into the hopper, inside the hopper.

Equipment I.D.	Description	Average Capacity	Maximum Capacity	Fug. Emission Controls
ZB QQ 70002	Gypsum Unloading Hopper	100 ton	100 ton	WS
ZB CV 70001	Gypsum Unloading Feeder	1500 TPH	1,500 TPH	MC, FE
STA-39	Transfer Station	1500 TPH	1,500 TPH	MC, FE
ZB CV 70002	Waste Gypsum Transfer Conveyor	1500 TPH	1,500 TPH	MC, PE
STA-40	Transfer Tower 4	1500 TPH	1,500 TPH	MC, FE
ZB CV 70003	Gypsum Overland Conveyor No. 1	1500 TPH	1700 TPH	MC, PE

Waste Gypsum to the Landfill

All waste gypsum is conveyed to the landfill. This may be transferred directly from the barge unloading system or may come from the Mountaineer Plant. Gypsum from the river barges is conveyed at a rate of 1500 tph directly to the landfill via the 48-inch Gypsum Transfer Conveyor ending at Gypsum Transfer Tower 4. The gypsum is then transferred onto the 48-inch Gypsum Overland Conveyor No. 1 (ZB-CV-70003) as it begins the trip to the landfill. This conveyor also receives gypsum directly from the belt filters in Tower 5. The Gypsum Overland Conveyor No. 1 (ZB-CV-70003) is the first of a series of five 48-inch overland conveyors to a staging pile in the landfill area. The gypsum will then be trucked from the staging pile to the active landfill in trucks. Each of the gypsum conveyors will incorporate ¾ covers to minimize the production of dust in the conveying operations.

The overland conveyors utilized to transfer the Mountaineer gypsum to the landfill will also be used to transfer barged gypsum. Gypsum from the river barges is conveyed directly to the landfill via one transfer conveyor and five overland conveyors. The two disposal systems will utilize the conveyors simultaneously.

Equipment I.D.	Description	Average Capacity	Maximum Capacity	Fug. Emission Controls
ZB-CV-70003	Gypsum Overland Conveyor #1	1500 TPH	1,700 TPH	MC, FE
STA-41	Transfer Tower #6	1500 TPH	1,700 TPH	MC, FE
ZB-CV-70004	Gypsum Overland Conveyor #2	1500 TPH	1,700 TPH	MC, FE
STA-42	Transfer Tower #7	1500 TPH	1,700 TPH	MC, FE
ZB-CV-70005	Gypsum Overland Conveyor #3	1500 TPH	1,700 TPH	MC, FE
STA-43	Transfer Tower #8	1500 TPH	1,700 TPH	MC, FE
ZB-CV-70006	Gypsum Overland Conveyor #4	1500 TPH	1,700 TPH	MC, FE
STA-44	Transfer Tower #9	1500 TPH	1,700 TPH	MC, FE
ZB-CV-70007	Gypsum Overland Conveyor #5	1500 TPH	1,700 TPH	MC, FE
STA-45	Transfer Tower #10	1500 TPH	1,700 TPH	MC, FE
ZB-CV-70008	Waste Gypsum Radial Stacker	1500 TPH	1,700 TPH	MC, FE
STA-46	Gypsum Telescoping Discharge Chute	1500 TPH	1,700 TPH	MC, FE
Pile	Landfill Staging Pile		22,125 Ton	

ATTACHMENT E - Emission Unit Form

***Emission Unit Description*:** Magnesium Hydroxide System

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** N/A
8S	Magnesium Hydroxide System	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
This system consists of the tank and unloading equipment for Magnesium Hydroxide.

Manufacturer:	**Model number:**	**Serial number:**
Custom	Custom	N/A

Construction date:	**Installation date:**	**Modification date(s):**
To be determined	To be determined	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Nominal – 1050 gph

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal – 1050 gph	10,512,000 gallons	8760 hrs/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _ _Yes __X_ No	**If yes, is it?** N/A _ _ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	N/A	N/A	
Nitrogen Oxides (NO_X)	N/A	N/A	
Lead (Pb)	N/A	N/A	
Particulate Matter ($PM_{2.5}$)	0.47	0.66	
Particulate Matter (PM_{10})	0.616	0.871	
Total Particulate Matter (TSP)	3.160	4.469	
Sulfur Dioxide (SO_2)	N/A	N/A	
Volatile Organic Compounds (VOC)	N/A	N/A	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
N/A	N/A	N/A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emission estimates are based on a combination of existing permit limitations, regulatory limitations, use of AP-42 emission factors, and operational and engineering knowledge.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Regulation 13 Permit R13-0075I:
Condition 4.1.12; and
Condition 4.1.16.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Condition 7.1.6; and
Condition 7.1.9.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Regulation 13 Permit R13-0075I:
Condition 4.2.9;
Condition 4.2.12, and
Conditions 4.4.1 through 4.4.3.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Condition 7.4.6; and
Condition 7.4.9.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Sulfur Trioxide (SO_3) Mitigation Strategy

Introduction

A Dry Sorbent Injection (DSI) SO_3 Mitigation System will be installed concurrently with the installation of the FGD system. The DSI system is designed to unload, store, and transfer both Trona and hydrated lime however Trona is the primary, design basis reagent that will be utilized to achieve all of the required SO_3 reduction. As a contingency to the Dry Sorbent Injection system, a detailed equipment rental and reagent procurement plan for a Magnesium Hydroxide ($Mg(OH)_2$) injection system has been prepared.

Magnesium Hydroxide System

The magnesium hydroxide system is considered a contingency, or back-up, pending performance or supply issues with the DSI system. The contingency plan supplies $Mg(OH)_2$ for a minimum of six (6) months with a built in option for a six (6) month extension. This 6 to 12 month period will permit a permanent $Mg(OH)_2$ system to be built and initiated at MT. The contingency plan includes the long-term rental of pumps, tanks, compressors, and controls. In addition, equipment that is long-lead time or requires a unit outage will be purchased or installed concurrently with the equipment for the DSI system. Furnace penetration panels and injection lances will be purchased for the $Mg(OH)_2$ system.

Magnesium hydroxide is received as aqueous slurry at 60% solids by weight. It is delivered via 4,000-gallon tanker trucks or railcars with a capacity of approximately 15,000 gallons per car. The slurry is transferred from the source to a storage tank using transfer pumps. Eight (8), 21,000-gallon HDPE storage tanks will be rented for temporary on-site storage. The contents of the storage tank are agitated and then transferred to a temporary dilution tank where filtered water is used to dilute the 60% solution to 15%. The estimated usage of 15% $Mg(OH)_2$ for furnace injection is a maximum of 120 gallons per minute, depending on unit load and system performance. The dilute slurry is pumped into the furnace via high pressure injection pumps.

The system, with the exception of the "as received" slurry storage tanks, will be housed indoors. The slurry unloading, storage, and injection areas will have trenches to collect any slurry spills that will be directed to a sump. Periodically this sump content will be pumped to the plant sump system for further treatment and disposal.

Magnesium hydroxide will be received, stored, and handled as slurry and therefore there will be no fugitive dust emissions. Magnesium hydroxide is not a listed Hazardous Air Pollutant. The spill prevention and control equipment and system will be based on good engineering practice.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: **Ammonia on Demand**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
9S	Ammonia on Demand	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Urea is received via truck deliveries and held in a hopper. The urea is combined with water and the resulting ammonia solution is utilized in the Selective Catalytic Reduction air pollution control system.

Manufacturer:	**Model number:**	**Serial number:**
Custom	Custom	N/A

Construction date:	**Installation date:**	**Modification date(s):**
2001	2001	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
3.5 ton/hour (nominal)

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
3.5 ton/hour (nominal)	30,935 ton/year	8760 hours/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it? N/A** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	N/A	N/A	
Nitrogen Oxides (NO_X)	N/A	N/A	
Lead (Pb)	N/A	N/A	
Particulate Matter ($PM_{2.5}$)	0.16	0.01	
Particulate Matter (PM_{10})	0.65	0.03	
Total Particulate Matter (TSP)	3.22	0.12	
Sulfur Dioxide (SO_2)	N/A	N/A	
Volatile Organic Compounds (VOC)	N/A	N/A	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
	N/A	N/A	
	N/A	N/A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
	N/A	N/A	
	N/A	N/A	

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Regulation 13 Permit R13-0075I: Condition 4.1.16.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Condition 7.1.9.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Regulation 13 Permit R13-0075I: Condition 4.2.12, and Conditions 4.4.1 through 4.4.3.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Condition 7.4.9.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: **Hydrated Lime System**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit: Bag House on Storage Bin.**
10S	Hydrated Lime System 35,916	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Hydrated Lime is received via pneumatic truck deliveries and held in a silo. The Hydrated Lime is utilized to control sulfur trioxide in the flue gas stream. If Hydrated Lime is used as the reagent in the SO_3 control system, it would be stored in the same silo in place of the trona.

Manufacturer:	**Model number:**	**Serial number:**
Custom	Custom	N/A

Construction date:	**Installation date:**	**Modification date(s):**
MM/DD/2006	MM/DD/2007	MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 2.5 TPH

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal 2.5 TPH		8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it? N/A** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	N/A	N/A	
Nitrogen Oxides (NO_X)	N/A	N/A	
Lead (Pb)	N/A	N/A	
Particulate Matter ($PM_{2.5}$)	151.01	660.9	
Particulate Matter (PM_{10})	151.47	661.2	
Total Particulate Matter (TSP)	154.02	663.0	
Sulfur Dioxide (SO_2)	N/A	N/A	
Volatile Organic Compounds (VOC)	N/A	N/A	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
	N/A	N/A	
	N/A	N/A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
	N/A	N/A	
	N/A	N/A	

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Regulation 13 Permit R13-0075I: Conditions 4.1.13; Condition 4.1.16.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Condition 7.1.7 and Condition 7.1.9.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Regulation 13 Permit R13-0075I: Condition 4.2.10; Condition 4.2.12, and Conditions 4.4.1 through 4.4.3.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Condition 7.4.7 and Condition 7.4.9.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Sulfur Trioxide (SO_3) Mitigation Strategy

Introduction

A Dry Sorbent Injection (DSI) SO_3 Mitigation System will be installed concurrently with the installation of the FGD system. The DSI system is designed to unload, store, and transfer both Trona and hydrated lime however Trona is the primary, design basis reagent that will be utilized to achieve all of the required SO_3 reduction. As a contingency to the Dry Sorbent Injection system, a detailed equipment rental and reagent procurement plan for a Magnesium Hydroxide ($Mg(OH)_2$) injection system has been prepared.

Dry Sorbent Injection System - Hydrated Lime

Hydrated lime is delivered as a powder by self-unloading pressure differential trucks to the plant. The trucks have a nominal capacity of 25 tons. Hydrated lime is pneumatically transferred to a storage silo. The storage silo has an active storage capacity of approximately 260 tons or 3 days reagent requirement at full load operation. The silo is equipped with a pulse-jet baghouse to mitigate fugitive dust emission during the pneumatic transfer operation.

Hydrated lime is pneumatically transferred and injected into the flue gas stream upstream of the electrostatic precipitator. The injection rate is expected to be 15 to 120 pound per minute. The number of lances, the type of nozzles and the injection locations are determined by flow modeling and are yet to be finalized. The injection system will use blowers, pneumatic conveying piping, air lances injection grid, nozzles and attendant piping and instrumentation required to inject and distribute hydrated lime uniformly across the ductwork upstream of the electrostatic precipitator.

The injection system, with the exception of the storage silo and conveying piping will be housed indoors. All equipment, components, piping, etc. will have adequate freeze protection as deemed necessary. Blowers and other rotating equipment will have redundancy to ensure operational reliability and flexibility.

Calcium hydroxide, or hydrated lime, will be delivered by trucks. The reagent will be pneumatically transferred into the storage silo. The silo is equipped with a pulse-jet baghouse.

Hydrated lime is delivered in 25-ton nominal capacity self-unloading pressure differential trucks. At full load conditions a maximum of 3.5 tph of lime will be required. The number of trucks per year is estimated at 1,435.

Equipment I.D.	Description	Average Capacity	Maximum Capacity	Fug. Emission Controls
	Truck Unloading Connection		25 TPH	TE
	Hydrated Lime Storage Silo		260 ton	BH
	Laidig Rotary Cone Auger		3.5 TPH	TE
	De-aeration Bins		3.5 TPH	TE
	Rotary Feeder		3.5 TPH	TE

ATTACHMENT E - Emission Unit Form

***Emission Unit Description*:** Trona System

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** Bag House on the storage bin.
11S	Trona System	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
This system consists of the silos and unloading equipment for Trona.

Manufacturer:	**Model number:**	**Serial number:**
Custom	Custom	N/A

Construction date:	**Installation date:**	**Modification date(s):**
2006	2007	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Nominal – 2.5 tph

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal – 2.5 tph	21,900 tons	8760 hrs/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _ _Yes __X_ No	**If yes, is it?** N/A _ _ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxides (NO_X)	N/A	N/A
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	151.3	661.3
Particulate Matter (PM_{10})	151.5	661.5
Total Particulate Matter (TSP)	154.0	664.6
Sulfur Dioxide (SO_2)	N/A	N/A
Volatile Organic Compounds (VOC)	N/A	N/A
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emission estimates are based on a combination of existing permit limitations, regulatory limitations, use of AP-42 emission factors, and operational and engineering knowledge.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Regulation 13 Permit R13-0075I:
Condition 4.1.14 and
Condition 4.1.16.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Conditions 7.1.8 through 7.1.9.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Regulation 13 Permit R13-0075I:
Conditions 4.2.11 through 4.2.12 and
Conditions 4.4.1 through 4.4.3.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Conditions 7.4.8 through 7.4.9.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Sulfur Trioxide (SO_3) Mitigation Strategy

Introduction

A Dry Sorbent Injection (DSI) SO_3 Mitigation System will be installed concurrently with the installation of the FGD system. The DSI system is designed to unload, store, and transfer both Trona and hydrated lime however Trona is the primary, design basis reagent that will be utilized to achieve all of the required SO_3 reduction. As a contingency to the Dry Sorbent Injection system, a detailed equipment rental and reagent procurement plan for a Magnesium Hydroxide ($Mg(OH)_2$) injection system has been prepared.

Dry Sorbent Injection System - Trona

The purpose of the Trona Injection System is to assist in the SO_3 mitigation. The trona in dry form is injected through a pneumatic conveying system to ductwork downstream of the air preheaters as a means to reduce SO_3 in the stack plume. The trona feed rate can be varied from 0.7 to 7 tons per hour. The Trona Injection System will be located north of the exhaust ducts that feed the precipitators. The Trona Silo will include an enclosed area for equipment under the silo cone and an additional building will be supplied for housing the system blowers.

A 430-ton capacity trona silo will receive trona from self-unloading pressure differential (PD) trucks. Two trucks truck can be off-loaded into the silo at any time. A bin vent filter is supplied for the filtered venting of the truck exhaust air (800 cfm). Aeration system will supply air to the weigh bins.

Trona will discharge out of the silo through use of a Laidig rotary reclaim auger. The weigh bins are individually set on a load cell assembly and are periodically filled based on weight set points. The bins serve to control the fluidity of the material and minimize the head pressure that the material imposes on the downstream variable speed rotary feeders.

The two (2) feed stack-ups below the de-aeration bins each consist of a variable speed rotary feeder, vent hopper, fixed-speed rotary airlock, and material pick-up tee. There will be two such stack-ups (one in-service and one stand-by), each with the capability to feed the 8-inch conveying lines to the Unit. A manual isolation valve is included at the discharge of the day bin.

The total material convey/injection rate is variable between 0.7 and 7 TPH for each system. The trona is fed into an 8-inch primary convey pipe, and subsequently split into three (3) five (5) inch pipes, and then eighteen (18) two and one-half (2-1/2) inch pipes. At the duct, each 2-1/2 inch pipe will supply two injection lances inserted into a flanged, sealed duct penetration box. Conveying air is supplied by two (2) two hundred fifty (250) Hp, blower skid packages (one operating and one as stand-by) isolated by air-operated valves. Dry plant compressed air will provide air for purging the bearings on the rotary feeders and rotary airlocks and for pulsation cleaning of the bags in the bin vent filter at the top of the day bin.

Equipment I.D.	Description	Average Capacity	Maximum Capacity	Fug. Emission Controls
	Truck Unloading Connection		25 TPH	TE
	Trona Storage Silo		430 ton	BH
	Laidig Rotary Cone Auger		7 TPH	TE
	De-aeration Bins		7 TPH	TE
	Rotary Feeder		7 TPH	TE

ATTACHMENT E - Emission Unit Form

***Emission Unit Description*:** Chloride Purge Stream Treatment System

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
12S	Chloride Purge Stream Treatment System	Bag House on Hydrated Lime Silo.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
This system consists of the tanks and unloading equipment for chemicals used for waste water treatment.

Manufacturer:	**Model number:**	**Serial number:**
Custom	Custom	N/A

Construction date:	**Installation date:**	**Modification date(s):**
2006	2007	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Nominal – 448 gpm

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal – 448 gpm	3,924,480 gallons	8760 hrs/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _ _Yes __X_ No	**If yes, is it?** N/A _ _ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	N/A	N/A	
Nitrogen Oxides (NO_X)	N/A	N/A	
Lead (Pb)	N/A	N/A	
Particulate Matter ($PM_{2.5}$)	222.1	971.2	
Particulate Matter (PM_{10})	222.9	971.3	
Total Particulate Matter (TSP)	227.9	971.4	
Sulfur Dioxide (SO_2)	N/A	N/A	
Volatile Organic Compounds (VOC)	N/A	N/A	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
N/A	N/A	N/A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emission estimates are based on a combination of existing permit limitations, regulatory limitations, use of AP-42 emission factors, and operational and engineering knowledge.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Regulation 13 Permit R13-0075I:
Condition 4.1.16 and Condition 4.1.18.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Conditions 7.1.5 and 7.1.9.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Regulation 13 Permit R13-0075I:
Condition 4.1.12;
Condition 4.2.14; and
Conditions 4.4.1 through 4.4.3.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Condition 7.4.5 and Condition 7.4.9.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

System Description of the Chloride Purge Stream Wastewater Treatment System.

The proposed Chloride Purge Stream (CPS) waste treatment system is designed to control effluent total suspended solids (TSS) concentration, pH and oil/grease within the NPDES Permit limitations. In addition to the TSS reduction, the treatment system is designed to be retrofitted should dissolved metals removal be required in the future. A generic treatment system process flow diagram (PFD) is provided as Figure 1 (See Attachment F).

The process includes equipment for precipitation of any dissolved sulfate ions via desaturation, primary clarification, chemical addition, mixing and reaction, secondary clarification and filtration. Chemicals are added to the wastewater stream to improve the removal efficiency, accomplished by increasing settling rates, of the waste stream solids. The solids removed from the FGD purge stream are dewatered and stored for disposal. Dewatering is accomplished by two (2) 515 cu ft filter presses. The design includes a provision to add a polymer conditioner just upstream of the secondary clarifiers if required. Sludge storage is in concrete bins, or rooms located beneath the filter presses. After the preset press cycle time is completed, "bomb bay" style doors open under the filter presses allowing the dewatered sludge to drop to the floor in the dewatered sludge storage room. The slide-gate access controlled storage sludge rooms will be open at one of the west end of the treatment building to allow front-end loaders access to the sludge in order to fill trucks. The projected amount of sludge cake that will be generated on an annual basis is 35,916 tons/year (dry) or 89,790 tons/year (wet).

Description of Lime Silo: Hydrated lime will be delivered to the site by pneumatic truck equipped with its own positive displacement rotary blower. Hydrated lime will be stored on site in two lime storage silos. A bag type bin vent filter, rated at 99.99 percent removal efficiency, will be provided to control escape of dust during transfer. Lime feeders and mix tanks will be located inside an enclosure below the silos.

Other Chemical Additions: Along with the hydrated lime, several other chemicals will be delivered for use in the wastewater treatment system. These include ferric chloride and acids delivered by bulk tank truck along with organosulfate (if future metals removal is required) and a polymer delivered in totes.

ATTACHMENT E - Emission Unit Form

***Emission Unit Description*:** Sulfuric Acid Tank

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** N/A
13S	Sulfuric Acid Tank	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
This system consists of the tank and unloading equipment for Sulfuric acid.

Manufacturer:	**Model number:**	**Serial number:**
Custom	Custom	N/A

Construction date:	**Installation date:**	**Modification date(s):**
2006	2007	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Nominal – 6,000 gallons capacity

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal – 10 gph	43,000 gallons	8760 hrs/year

***Fuel Usage Data* (fill out all applicable fields)**

Does this emission unit combust fuel? _ _Yes __X_ No	**If yes, is it?** N/A _ _ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxides (NO_X)	N/A	N/A
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	N/A	N/A
Particulate Matter (PM_{10})	N/A	N/A
Total Particulate Matter (TSP)	N/A	N/A
Sulfur Dioxide (SO_2)	N/A	N/A
Volatile Organic Compounds (VOC)	N/A	N/A
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Sulfuric Acid		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emission estimates are based on a combination of existing permit limitations, regulatory limitations, use of AP-42 emission factors, and operational and engineering knowledge.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the

underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Regulation 13 Permit R13-0075I:
Condition 4.1.16 and Condition 4.1.18.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Conditions 7.1.5 and Condition 7.1.9.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Regulation 13 Permit R13-0075I:
Condition 4.2.12;
Condition 4.2.14: and
Conditions 4.4.1 through 4.4.3.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Condition 7.4.5 and Condition 7.4.9.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

***Emission Unit Description*:** Hydrochloric Acid Tank

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** N/A
14S	Hydrochloric Acid Tank	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
This proposed system consists of the tank and unloading equipment for Hydrochloric acid.

Manufacturer:	**Model number:**	**Serial number:**
Custom	Custom	N/A

Construction date:	**Installation date:**	**Modification date(s):**
TBD	TBD	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Nominal – 6,000 gallons capacity

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal – 25 gph	108,000 gallons	8760 hrs/year

***Fuel Usage Data* (fill out all applicable fields)**

Does this emission unit combust fuel? _ _Yes __X_ No	**If yes, is it?** N/A _ _ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxides (NO_X)	N/A	N/A
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	N/A	N/A
Particulate Matter (PM_{10})	N/A	N/A
Total Particulate Matter (TSP)	N/A	N/A
Sulfur Dioxide (SO_2)	N/A	N/A
Volatile Organic Compounds (VOC)	N/A	N/A
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Hydrochloric Acid		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emission estimates are based on a combination of existing permit limitations, regulatory limitations, use of AP-42 emission factors, and operational and engineering knowledge.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Regulation 13 Permit R13-0075I:
Condition 4.1.16 and Condition 4.1.18.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Conditions 7.1.5 and Condition 7.1.9.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Regulation 13 Permit R13-0075I:
Condition 4.2.12;
Condition 4.2.14; and
Conditions 4.4.1 through 4.4.3.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Condition 7.4.5 and Condition 7.4.9.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: **Coping Power Emergency Generators**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
16S	2 Coping Power Emergency Generators	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
See attached description.

Manufacturer:	**Model number:**	**Serial number:**
Caterpillar	CAT 3516-HD TA	

Construction date:	**Installation date:**	**Modification date(s):**
2014	2014	MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
2-Generators at 18.67 mmBTU/hr each
2-Diesel Storage Tanks at 2650 gallon capacity each

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
3003 bhp at 1800 rpm		

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it? N/A** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: 3003 bhp at 1800 rpm	**Type and Btu/hr rating of burners:** 18.7 mmBTU/hr each

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Diesel

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel	0.01%		18390 BTU/lb

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	6.48	1.92
Nitrogen Oxides (NO_X)	72.8	18.2
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})	0.38	0.1
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)	0.38	0.1
Volatile Organic Compounds (VOC)	2.12	0.54
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	<1	<1
	N/A	N/A
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
	N/A	N/A
	N/A	N/A

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Calculations are combined to account for each of the two engines. The emissions are calculated using manufacturers emission factors and US EPA's AP-42 emission factors.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Recommended Title V Permit language (Section 9.0) in Appendix J for Permit G60-C062:

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Recommended Title V Permit language (Section 9.0) in Appendix J for Permit G60-C062:

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Process Description:

With changes in the constituency of the power plants which comprise the AEP system, Automated Load Reject (ALR) power plants which could load reject and supply auxiliary power to the supercritical units in a relatively short period of time during a regional power outage are being decommissioned. During a regional power outage, it is expected that units within the affected area will need to disconnect from the grid. Since the affected units will not be able to obtain auxiliary power from the grid, they will shut down with only emergency DC battery power, per the original design basis. The batteries only supply power to critical DC loads.

As a result of the above concerns, AEP is equipping certain power plants with Coping Power to provide AC power to critical equipment during loss of auxiliary AC power until normal reserve auxiliary power from the grid is restored. Mountaineer is one of the selected plants. Coping power is defined as the electrical power required during a black plant shut down event, to safely maintain necessary unit equipment in a condition which will allow the unit to begin start up, after any required restoration effort, once the plant's connection to the grid is restored.

Coping Power Design Basis capability will supply the power plant auxiliary busses with sufficient power to operate necessary AC-powered equipment. Coping Power will be supplied to the plant via two, 2.0 Mw, 4 KV fuel oil-powered emergency diesel generators (EDG), located south of the boiler house and west of the auxiliary transformer bank. Each diesel generator will be inside its own sound-deadening weather enclosure. The sound level for the individual enclosures will be 85 dBA at approximately 7 meters (depending on the vendor), which is an industry standard. Each EDG will have a self-contained fuel oil day tank of 24-hour capacity. Any fuel oil required beyond the 24-hour duration will be supplied by the plant personnel, by transfer from a fuel oil truck or the plant may pipe a supply line directly from the existing ignition oil tanks to the EDG day tanks. This power will be routed through an adjacent Power Distribution Center (PDC) building to the plant 4 KV busses, and to a new 4 KV to 13.8 KV transformer which will feed the unit's 13.8 KV bus, and FGD and WWT buses.

A plant buss screen has been created that will allow a controlled re-energizing of the necessary equipment can begin once the busses are re-energized. The EDG will automatically start upon a Black Shutdown signal. They will automatically come to speed and energize the emergency diesel generator buss.

Operation of the diesel generators is broken down into two categories, Coping Power and Routine Monthly Load Testing. Coping power is the situation where the utility may or may not be black but for some reason the 765, or 138 KV lines to the plant are disrupted and the plant must shut down and maintain ready restart status. The monthly load testing is required to maintain the diesels in working condition and may be required to test modifications of the engine or controls. There will be periodic starting and loading of the EDG (based upon the manufacturer's recommendation) which will require each EDG be paralleled to the system. The system is designed with the capability to parallel to an energized bus for testing as well as being able to tie to a de-energized bus which would be the expected operation during black-out event.

The EDG will be Tier II emission units burning ultra-low sulfur fuel oil (15 PPM sulfur), and will be operated for no more than the permitted hours each year. The units will not be permitted to operate as peaking units.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: **Emergency Fire Pump Engines**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
17S	2 Emergency Fire Pump Engines	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
See attached description.

Manufacturer:	**Model number:**	**Serial number:**
Caterpillar	Cummins CFP9E-F30	

Construction date:	**Installation date:**	**Modification date(s):**
2017	2017	MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
2-Engines at 2.2 MMBTU/hr each
2-Diesel Storage Tanks at 350 gallon capacity each

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
308 bhp each		

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it? N/A** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: 308 bhp each	**Type and Btu/hr rating of burners:** 18.7 mmBTU/hr each

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Diesel

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel	0.01%		18390 BTU/lb

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.96	0.24
Nitrogen Oxides (NO_X)	1.49	0.37
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})	0.08	0.02
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)	0.38	0.01
Volatile Organic Compounds (VOC)	0.08	0.02
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	<1	<1
	N/A	N/A
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
	N/A	N/A
	N/A	N/A

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Calculations are combined to account for each of the two engines. The emissions are calculated using manufacturers emission factors and US EPA's AP-42 emission factors.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Recommended Title V Permit language (Section 9.0) in Appendix J for Permit G60-C062:

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Recommended Title V Permit language (Section 9.0) in Appendix J for Permit G60-C062:

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Process Description:

With changes in the constituency of the power plants which comprise the AEP system, Automated Load Reject (ALR) power plants which could load reject and supply auxiliary power to the supercritical units in a relatively short period of time during a regional power outage are being decommissioned. During a regional power outage, it is expected that units within the affected area will need to disconnect from the grid. Since the affected units will not be able to obtain auxiliary power from the grid, they will shut down with only emergency DC battery power, per the original design basis. The batteries only supply power to critical DC loads.

As a result of the above concerns, AEP is equipping certain power plants with Coping Power to provide AC power to critical equipment during loss of auxiliary AC power until normal reserve auxiliary power from the grid is restored. Mountaineer is one of the selected plants. Coping power is defined as the electrical power required during a black plant shut down event, to safely maintain necessary unit equipment in a condition which will allow the unit to begin start up, after any required restoration effort, once the plant's connection to the grid is restored.

Coping Power Design Basis capability will supply the power plant auxiliary busses with sufficient power to operate necessary AC-powered equipment. Coping Power will be supplied to the plant via two, 2.0 Mw, 4 KV fuel oil-powered emergency diesel generators (EDG), located south of the boiler house and west of the auxiliary transformer bank. Each diesel generator will be inside its own sound-deadening weather enclosure. The sound level for the individual enclosures will be 85 dBA at approximately 7 meters (depending on the vendor), which is an industry standard. Each EDG will have a self-contained fuel oil day tank of 24-hour capacity. Any fuel oil required beyond the 24-hour duration will be supplied by the plant personnel, by transfer from a fuel oil truck or the plant may pipe a supply line directly from the existing ignition oil tanks to the EDG day tanks. This power will be routed through an adjacent Power Distribution Center (PDC) building to the plant 4 KV busses, and to a new 4 KV to 13.8 KV transformer which will feed the unit's 13.8 KV bus, and FGD and WWT buses.

A plant buss screen has been created that will allow a controlled re-energizing of the necessary equipment can begin once the busses are re-energized. The EDG will automatically start upon a Black Shutdown signal. They will automatically come to speed and energize the emergency diesel generator buss.

Operation of the diesel generators is broken down into two categories, Coping Power and Routine Monthly Load Testing. Coping power is the situation where the utility may or may not be black but for some reason the 765, or 138 KV lines to the plant are disrupted and the plant must shut down and maintain ready restart status. The monthly load testing is required to maintain the diesels in working condition and may be required to test modifications of the engine or controls. There will be periodic starting and loading of the EDG (based upon the manufacturer's recommendation) which will require each EDG be paralleled to the system. The system is designed with the capability to parallel to an energized bus for testing as well as being able to tie to a de-energized bus which would be the expected operation during black-out event.

The EDG will be Tier II emission units burning ultra-low sulfur fuel oil (15 PPM sulfur), and will be operated for no more than the permitted hours each year. The units will not be permitted to operate as peaking units.

ATTACHMENT E - Emission Unit Form

***Emission Unit Description*:** System Wide – Ash Handling System

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** Silo vents, mechanical controls, water sprays
N/A	Ash Handling System	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
This system consists of the ash vacuum removal system, Silo storage, truck loadout, and truck travel to the landfill.

Manufacturer:	**Model number:**	**Serial number:**
Various	Custom	N/A
Construction date:	**Installation date:**	**Modification date(s):**
1974	1979	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Vacuum Transfer Capacity (nominal) – 80 ton/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal – 80 ton/hr	1,026,497 tons	8760 hrs/year

***Fuel Usage Data* (fill out all applicable fields)**

Does this emission unit combust fuel? _ _Yes __X _ No	**If yes, is it?** N/A _ _ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxides (NO_X)	N/A	N/A
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	5.17	22.63
Particulate Matter (PM_{10})	20.47	89.68
Total Particulate Matter (TSP)	93.54	409.72
Sulfur Dioxide (SO_2)	N/A	N/A
Volatile Organic Compounds (VOC)	N/A	N/A
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions were calculated using the path of maximum emissions the system is capable. The amount of coal estimated for annual usage was 7,603,680 tpy, the typical coal burn for full load operation. No controls other than those that are inherent to the system were included in the calculations.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Conditions 5.1.1;
Condition 5.1.12; and
Condition 5.1.17.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Conditions 3.3.4.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

***Emission Unit Description*:** System Wide – Coal Handling System

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
N/A	Coal Handling System	Conveyor covers, partial and full enclosures, mechanical controls, water sprays

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
This system consists of the barge unloader, rail car unloader, chutes and conveyors, transfer stations, crushers, storage piles and silos for coal.

Manufacturer:	**Model number:**	**Serial number:**
Various	Custom	N/A

Construction date:	**Installation date:**	**Modification date(s):**
1974	1979	2007

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Conveyor Transfer Capacity (nominal) – 2000 to 4000 ton/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal – 7,000 ton/hr	50,000,000 tons	8760 hrs/year

***Fuel Usage Data* (fill out all applicable fields)**

Does this emission unit combust fuel? _ _Yes __X _ No	**If yes, is it?** N/A _ _ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxides (NO_X)	N/A	N/A
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	3.92	15.73
Particulate Matter (PM_{10})	22.08	87.36
Total Particulate Matter (TSP)	65.30	266.25
Sulfur Dioxide (SO_2)	N/A	N/A
Volatile Organic Compounds (VOC)	N/A	N/A
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions were calculated using the path of maximum emissions the system is capable. The facility may unload both barges and rail cars or a combination of one of those with the mine connector conveyor. The maximum emissions were determined using the rail and barge unloader conveyor routings. The coal from those systems would be placed onto the storage pile then reclaimed through the reclaim hoppers then transferred to the units. The amount of coal estimated for daily usage was 7,603,680 tpd, the typical coal burn for full load operation. No controls other than those that are inherent to the system were included in the calculations.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permit is attached to provide the applicable language along with the underlying rule/regulatory citation and calculation basis is provided. For existing limitations previously captured in a permit, the calculations were provided in the previous permit application(s). No changes to existing permit limits are being requested at this time.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Conditions 5.1.1;
Condition 5.1.12; and
Condition 5.1.17.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the actual language along with the underlying rule/regulatory citation. No changes are being requested at this time.

See Regulation 30 Permit R30-5300009-2014 (MM01/SM01):
Condition 3.3.4.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

COAL HANDLING – GENERAL

Introduction

Mountaineer Plant receives coal by river barge and by railcar. The coal handling system receives and transfers coal from these sources to the coal silos or to the coal storage piles.

Station 1 River Barge Unloading

Coal delivered to Mountaineer Plant by river barge is unloaded at Station 1. River barges are moored at the coal dock, and unloaded using the Heyl and Patterson barge unloader. Coal from the barge unloader is transported by Conveyor 1 and Conveyor 15 to Station 5.

Station 3N Rail Car Unloading

Railcars are brought into the plant in groups, called unit trains. The railcars are unloaded, three at a time, at the railcar shakeout building. Coal from the rail cars fall into ten hoppers and then onto ten belt feeders. The ten belt feeders transport the coal the short distance to Conveyor 3N. The coal on Conveyor 3N is transferred to either Conveyor 3N5 for delivery to Station 5, or in the future may be transferred to stacker 3N for placement on a storage pile.

Station 5 –

Station 5 serves to remove tramp iron by electromagnets at the head end of the incoming conveyors, crush oversized pieces of coal to an acceptable size, and transfer the coal to either or both outgoing conveyors 56N or 56S.

After leaving Station 5, the coal on conveyors 56N or 56S is weighed by 56N or 56S scales, respectively. These scales provide coal weights received by the river barges and from the railcars.

Station 6 -

From conveyors 56N or 56S, the coal enters Station 6. After being sampled, this coal leaves Station 6 on one of four conveyors, 6-N, 6-S, 67N or 67S. Coal directed to Conveyor 6-N is sent to a portable stacker for placement on a storage pile located at the north side of Station 6. Coal directed to Conveyor 6-S is sent to a portable stacker for placement on a storage pile located at the south side of Station 6. Coal directed to Conveyor 67S is sent to the stacker/reclaimer for placement on the coal storage piles, or when in the Part-Stack Mode, to the storage piles and to Station 7. Coal directed to Conveyor 67N is sent to Station 7.

Stacker/Reclaimer and Reclaim Hoppers –

Coal not immediately needed for filling the coal silos is directed to the stacker/reclaimer for placement on the coal storage piles. The stacker/reclaimer can also be used to control the rate at which coal is sent to the coal silos. The conveyors upstream of Station 7 have a maximum capacity of 2000 TPH. The stacker/reclaimer can reclaim coal at an average rate of 2000 TPH, but is capable of a maximum capacity of 2500 TPH.

Coal can be reclaimed from the storage piles for use in the plant by the stacker/reclaimer at an average rate of 2000 TPH and at a maximum rate of 2500 TPH. Coal reclaimed by the stacker/reclaimer is deposited on Conveyor 67S and is weighed by the 67S scale upon its trip to the Station 7. Coal can also be reclaimed from the live surge pile. Below the live surge pile are ten hoppers equipped with motor operated slide gates. Below each slide gate is a variable speed belt feeder. The belt feeders have a capacity of from zero to 700 TPH. Coal reclaimed using the hoppers is transported by the belt feeders to Conveyor 7S. From Conveyor 7S the coal is transferred to Conveyor

7S7 and sent to Station 7. Before reaching Station 7, the coal is weighed by Scale 7S7 to give the flow rate of the coal on the conveyor as an output. The scales are used to monitor the flow rate of coal on the conveyors.

Station 7 -

Station 7 houses the coal handling system surge bin. The Station 7 surge bin, with a capacity of 140 tons, provides temporary storage for the coal and a method to ensure the upstream conveyors are not overloaded. Station 7 serves to transfer coal from oncoming conveyors 7S7 and 67S to outgoing conveyors 78N and 78S.

Station 8 -

The possibility exists that during the winter months, coal reclaimed from the coal storage piles may be frozen into large pieces. Crushers at Station 8 provide a method to break down large chunks of coal into a size acceptable for use in the plant. If the crushers are not needed, the diversion gates can be arranged so the coal bypasses the crushers.

Electromagnets are located in Station 8 at the head pulleys to remove any tramp iron that may be mixed with the coal.

Coal from Station 8 that is transported on Conveyors 89E or 89W is carried across 89E or 89W scales, respectively. Both the 89E scale and the 89W scale are used to measure coal consumed by the unit.

Station 9 –

In Station 9, coal is sampled, before continuing on to the unit, by the as-fired sampler at Station 9.

Coal from Station 9 on Conveyor 9B enters Station B and can be directed either to Silos 1 through 7 or to Conveyor AB for transport to Station A, or to both Conveyor AB and Silos 1 through 7. Coal directed to Silos 1 through 7 can be sent either to the north silo filling conveyors or to the south silo filling conveyors.

Station 10 –

At Station 10 coal from Conveyor 910 is transferred to Conveyor 10A before being sent to Station A. Coal enters Station A and is directed either to Silos 8 through 14 or to Conveyor AB for transport to Station B. Coal directed to Silos 8 through 14 can be sent either to the north silo filing conveyors or to the south silo filling conveyors. To transport coal to Station B, the coal is directed to Conveyor AB. Conveyor AB is bi-directional; coal can be sent to Station B from Station A, or to Station A from Station B.

Blending Coal

The coal handling system is designed to allow the blending of coal from different suppliers to meet the needs of the plant.

The blending of coal can take place in the following ways:

- The stacker/reclaimer can be used to selectively reclaim coal from the coal storage piles
- Using the variable belt feeders located below the live surge pile, blending can be accomplished by reclaiming coal, from different areas of the coal storage piles, at different rates.
- Coal from the river barges, the railcars and the storage piles can be directed to Station 7 for blending in the surge bin.

Attachment F

Schedule of Compliance Forms

No forms being submitted

Attachment G

Air Pollution Control Device Forms

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: MT1 ESP	**List all emission units associated with this control device.** Unit 1 Steam Generator	
Manufacturer: Wheelabrator-Frye Inc.	**Model number:** Custom	**Installation date:** 1974

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter
___ Carbon Bed Adsorber
___ Carbon Drum(s)
___ Catalytic Incinerator
___ Thermal Incinerator
___ Wet Plate Electrostatic Precipitator
___ Venturi Scrubber
___ Packed Tower Scrubber
___ Other Wet Scrubber
___ Condenser
___ Flare
___ Multiclone
___ Single Cyclone
___ Cyclone Bank
___ Settling Chamber
___ Other (describe) _____
_X_ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
PM	100%	99.7%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Average Pressure Drop – 0.1080 inches H_2O
Average Gas Flow Rate – 4,339,999 acfm
Average Operating Temperature - 370 ^oF
Design Removal Efficiency – 99.7%

Is this device subject to the CAM requirements of 40 C.F.R. 64? _X_ Yes ___ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Monitor Opacity as an indicator if precipitator performance. Periodic stack tests are performed to assure compliance with the mass standard.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: MT1 FGD	**List all emission units associated with this control device.** Unit 1 Steam Generator	
Manufacturer: Alstom	**Model number:** Custom	**Installation date:** 2007

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter
___ Carbon Bed Adsorber
___ Carbon Drum(s)
___ Catalytic Incinerator
___ Thermal Incinerator
___ Wet Plate Electrostatic Precipitator
___ Venturi Scrubber
___ Packed Tower Scrubber
_X_ Other Wet Scrubber
___ Condenser
___ Flare
___ Dry Plate Electrostatic Precipitator
___ Multiclone
___ Single Cyclone
___ Cyclone Bank
___ Settling Chamber
___ Other (describe) _____

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
SO_2	100%	95%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Average Gas Flow Rate – 4,339,999 acfm
Outlet Operating Temperature - 128 °F
Design Removal Efficiency – 95 %

Is this device subject to the CAM requirements of 40 C.F.R. 64? __ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** Monitor SO_2 using an existing Continuous Emission Monitor.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Monitor SO_2 using an existing Continuous Emission Monitor.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: MT1 SCR	**List all emission units associated with this control device.** Unit 1 Steam Generator	
Manufacturer:	**Model number:** Custom	**Installation date:** 2001

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter
___ Carbon Bed Adsorber
___ Carbon Drum(s)
___ Catalytic Incinerator
___ Thermal Incinerator
___ Wet Plate Electrostatic Precipitator
___ Venturi Scrubber
___ Packed Tower Scrubber
___ Other Wet Scrubber
___ Condenser
___ Flare
___ Multiclone
___ Single Cyclone
___ Cyclone Bank
___ Settling Chamber
_X_ Other (describe) Selective Catalytic Reduction
___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
NO_x	100%	90%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Design Operating Temperature - 750 ºF
Design Removal Efficiency – 90%
Maximum Ammonia Slip – 2 ppmvd @ 3% O_2

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** Continuous Emissions Monitoring is used.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Monitoring of NO_x is performed by a Continuous Emissions Monitor.

Attachment H

Compliance Assurance Monitoring (CAM) Forms

ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at http://www.epa.gov/ttn/emc/cam.html

CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*): ☒ YES ☐ NO

a. The PSEU is located at a major source that is required to obtain a Title V permit;

b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is NOT exempt;

LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
- Stratospheric Ozone Protection Requirements.
- Acid Rain Program Requirements.
- Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
- An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).

c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;

d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND

e. The PSEU is NOT an exempt backup utility power emissions unit that is municipally-owned.

BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit:

☒ RENEWAL APPLICATION. **ALL** PSEUs for which a CAM plan has NOT yet been approved need to be addressed in this CAM plan submittal.

☐ INITIAL APPLICATION (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

☐ SIGNIFICANT MODIFICATION TO LARGE PSEUs. **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, Only address the appropriate monitoring requirements affected by the significant modification.

3) [a] BACKGROUND DATA AND INFORMATION					
Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU In order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.					
PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	[b] EMISSION LIMITATION or STANDARD	[c] MONITORING REQUIREMENT
Unit 1	Coal Fired Steam Generator	PM	Electrostatic Precipitator (ESP)	45 CSR 2-4.1.a	Monitor Duct Opacity using COMs
EXAMPLE Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

[a] If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

[b] Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

[c] Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

CAM MONITORING APPROACH CRITERIA

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. if more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.

4a) PSEU Designation: Unit 1	**4b) Pollutant:** PM	**4c) [a] Indicator No. 1:** Opacity	**4d) [a] Indicator No. 2:** Opacity
5a) GENERAL CRITERIA Describe the MONITORING APPROACH used to measure the indicators:		Opacity data is measured and recorded by a certified continuous opacity monitoring system (COMS). The 6-minute average data is recorded and will be used to calculate block 3-hour average opacity values.	Opacity data is measured and recorded by a certified continuous opacity monitoring system (COMS). The 6-minute average data is recorded and will be used to calculate block 3-hour average opacity values.
[b] Establish the appropriate INDICATOR RANGE or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		Opacity data has been collected during Method 5 particulate emission testing. The plan will incorporate existing test data along with CAM stack testing to verify a conservative indicator range. The proposed upper threshold value of the indicator range is a 3-hour block average opacity value greater than 10% Opacity	Excess short duration opacity increases occurring during any calendar quarter are not to exceed 5% of the total operating time.
5b) PERFORMANCE CRITERIA Provide the SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA, such as detector location, installation specifications, and minimum acceptable accuracy:		The COMs is located in the duct downstream of the ESP in accordance with 40 CFR 60.13(i)(1); the COMs is installed, maintained and provides data accuracy in accordance with 40 CFR 75.	The COMs is located in the duct downstream of the ESP in accordance with 40 CFR 60.13(i)(1); the COMs is installed, maintained and provides data accuracy in accordance with 40 CFR 75.
[c] For new or modified monitoring equipment, provide VERIFICATION PROCEDURES, including manufacturer's recommendations, TO CONFIRM THE OPERATIONAL STATUS of the monitoring:		N/A	N/A
Provide QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):		QA/QC is performed in accordance with 40 CFR 75.	QA/QC is performed in accordance with 40 CFR 75.
[d] Provide the MONITORING FREQUENCY:		Opacity is measured continuously except for periods of monitor malfunction or downtime (e.g. calibration, repairs, etc.)	Opacity is measured continuously except for periods of monitor malfunction or downtime (e.g. calibration, repairs, etc.)
Provide the DATA COLLECTION PROCEDURES that will be used:		Opacity data will be collected and stored in a Data Acquisition System (DAS) on a block 3-hour average basis.	Opacity data will be collected and stored in a Data Acquisition System (DAS) on a block 3-hour average basis.
Provide the DATA AVERAGING PERIOD for the purpose of determining whether an excursion or exceedance has occurred:		The opacity values used to compare with the upper threshold value of the indicator range is the block 3-hour average opacity (short duration opacity increase).	The opacity values used to compare with the upper threshold value of the indicator range is the block 3-hour average opacity (short duration opacity increase) and the total operating time of the units.

[a] Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

[b] Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

[c] The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

[d] Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

RATIONALE AND JUSTIFICATION

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:	6b) Regulated Air Pollutant:
Unit 1	PM

7) **INDICATORS AND THE MONITORING APPROACH**: Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

Appalachian Power believes that the continuous opacity monitoring system (COMS) data is the most appropriate and readily available indicator for continuously evaluating the performance and operations of the electrostatic precipitator and thereby assessing compliance with the applicable particulate emission rate limitation between periodic 40 CFR Part 60, Method 5 compliance testing. Monitoring of other ESP operating parameters such as TR set voltage and current levels may be beneficial in evaluating ESP performance trends on a short term basis, however, these are not continuous nor are they direct indicators of conditions in the stack prior to release of the flue gas. For these reasons, a specific corrective action plan has been developed based upon opacity monitoring. This corrective action plan will be implemented at any time there is a short duration or a sustained duration increase in opacity above the upper threshold value of the indicator range**.**

Monitoring: The permittee shall monitor and maintain 6-minute opacity averages measured by a continuous opacity monitoring system, operated and maintained pursuant to 40 C.F.R. Part 75, including the minimum data requirements, in order to determine 3-hour block average opacity values. The 6-minute opacity averages shall be used to calculate 3-hour block average opacity values. The COM QA/QC procedures shall be equivalent to the applicable requirements of 40 C.F.R. Part 75. Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, but not limited to, calibration checks and required zero and span adjustments), the opacity shall be continuously monitored (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs and QA/QC activities shall not be used for purposes of 40 C.F.R. Part 64, including data averages and calculations, or fulfilling a minimum data availability requirement. Data availability shall be at least of 50% of the operating time in the 3-hour block to satisfy the data requirements to calculate the 3-hour average opacity. The number of invalid 3-hour blocks shall not exceed 15% of the total 3-hour blocks during unit operation for a quarterly reporting period.

Recordkeeping: Records of the block 3-hour COMS opacity averages and corrective actions taken during excursions of the CAM plan indicator range shall be maintained on site and shall be made available to the Director or his duly authorized representative upon request. COMS performance data will be maintained in accordance with 40 C.F.R. Part 75 recordkeeping requirements**.** The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40 C.F.R. Part 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

Reporting: The permittee shall submit semiannual monitoring reports to the DAQ. A report for monitoring under 40 C.F.R. 64 shall include, at a minimum, the following information: (a) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions and the corrective actions taken; (b) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks); and (c) A description of the actions taken to implement a quality improvement plan (QIP) during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

For purposes of this corrective action plan:
A **short duration increase in opacity** is defined as an increase in opacity that persists for at least a block three-hour period (30 consecutive 6-minute periods), and which measure greater than the upper threshold value of the indicator range.
A **sustained increase in opacity (or an excursion)** is defined as an increase in opacity that persists for two consecutive 3-hour block periods (two consecutive short duration opacity increase periods), and which measure greater than the upper threshold value of the indicator range.

This plan outlines specific corrective action procedures to be implemented by plant personnel for the following scenarios:

Case A: Upon alarm of a Short duration increase in opacity.
Case B: Upon alarm of a sustained increase in opacity.

These corrective action procedures do not apply to opacity increases that occur during exempt periods. Assignment of personnel to carry out each step of this plan will be the sole responsibility of Plant Management and may change based upon specific conditions.

Case A: (Short duration increase in opacity.)
Plant personnel will continue to observe the COMS data and at the same time initiate a review of other available information (such as: TR set status, voltage, current, operating parameters, etc.) in order to validate and/or identify the cause of the opacity increase.

1. If the opacity does not return to and remain at normal operating levels within (within 180 minutes), further corrective action may become necessary.
2. If the cause of the opacity increase is not already known, unit-operating data will be collected for the purpose of determining the cause of the opacity increase.
3. If the opacity increase occurs after normal working hours, on weekends, or holidays; the unit-operations data may be collected the following working day.
4. Once the cause of the opacity increase is determined, plant personnel will take necessary steps to mitigate the unit operating condition or equipment failure that is found to be causing the short duration opacity increase.

B. Case B: (Sustained increase in opacity.)

1. Upon detecting an excursion or exceedance, the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
2. If the opacity does not return and remain at normal operating levels within a short duration (within 180 minutes), and the cause of the opacity increase is not already known, further analysis of the unit, and auxiliary operating data will be analyzed and recorded for the purpose of determining the cause of the opacity increase.
3. If the opacity increase occurs after normal working hours, on weekends, or holidays, off-shift personnel may be required to determine the cause of the opacity increase and initiate appropriate corrective actions.
4. Plant personnel will initiate the following corrective actions as necessary to reduce stack opacity to normal operating levels:
   a. Any individual TR sets that are out-of-service or not operating at normal power levels shall be repaired and/or adjusted as appropriate.
   b. ESP rapping procedures may be initiated and/or adjusted as necessary.
   c. Flue gas conditioning systems will be placed in service or adjusted as necessary.
   d. Depending on the specific events found to be the cause of the opacity increase, other corrective actions will be implemented as necessary to reduce the opacity to normal operating levels.

If five (5) percent or greater of the block three (3) hour average COMS opacity values indicate excursions of the 10% opacity threshold during a calendar quarter, the permittee shall develop and implement a QIP. The Director may waive this QIP requirement upon a demonstration that the cause(s) of the excursions have been corrected, or may require stack tests at any time pursuant to permit condition 3.3.1.

If the opacity level continues to exceed the upper threshold value of the indicator range Opacity after the corrective actions as outlined above for Case B are implemented, plant personnel will contact appropriate management staff to obtain necessary approvals to reduce load, or in extreme cases, commence a unit shutdown in order to remediate the cause of the opacity increase.

Based on the results of a determination of actions taken by the permittee, the Administrator or the Director may require the permittee to develop and implement a QIP. If a QIP is required, then it shall be developed, implemented, and modified as required according to 40 C.F.R. §§ 64.8(b) through (e).

8) **INDICATOR RANGES**: Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how **EACH** indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.

- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.

- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

RATIONALE AND JUSTIFICATION:

The indicator is based upon an opacity/mass relationship of the emissions unit at full load operation. It is anticipated that the 0.05 lb/mmBTU particulate emissions limit will not be exceeded when 3-hour block opacity values remain at or below 10% opacity. Accordingly, the Mountaineer Plant can demonstrate a reasonable assurance of compliance with the particulate mass emission limit as long as the 3-hour block average stack (duct) opacity is maintained below the upper threshold value of 10%. opacity.

Appalachian Power Company is proposing that the opacity/mass relationship be verified using existing baseline mass particulate emission test results and additional full load "CAM Testing". Based on previous compliance or performance testing of the electrostatic precipitator using 40 CFR Part 60 methods, Appalachian Power Company believes that compliance with the upper threshold value of 10% opacity for the 3-hour block average periods will provide reasonable assurance of compliance with the particulate emission standard. The 10% threshold was chosen for two reasons: first, the historic particulate emission test data that has been collected over the past few years shows this source to be in compliance with the 0.05 lb/mmBTU particulate limit by a good margin when stack opacity is less than 10% and second, we presume that DAQ established the 10% 45 CSR 2 opacity SIP limit at a level that DAQ believes sources will likely be in compliance with the mass SIP limit to provide a conservative reasonable assurance of compliance with the mass emission limit. The 3-hour block averaging time period was chosen to provide adequate time to make operational corrections to comply with the particulate mass emission standard.

Historic baseline test data collected in the past recent years and submitted to WV DEP is summarized below:

Test Date	Measured Emission Rate	Average Opacity
01/16/2024	0.0032 lb/mmBTU	5.2%
01/20/2021	0.0036 lb/mmBTU	2.9%
01/26/2018	0.0019 lb/mmBTU	2.6%
03/25/2015	0.0087 lb/mmBTU	4.5%
04/12/2012	0.0032 lb/mmBTU	7.3%
07/15/2009	0.0044 lb/mmBTU	10.3%
07/15/2009	0.0111 lb/mmBTU	6.1%
10/03/2007	0.0130 lb/mmBTU	5.0%
01/13/2005	0.0102 lb/mmBTU	2.4%
02/27/2002	0.0199 lb/mmBTU	8.6%
07/30/1998	0.0205 lb/mmBTU	5.3%

No changes have been made that would significantly impact ESP performance. Data collected during future periodic 45CSR2 mass emissions tests will be used to supplement the existing data set in order to verify the continuing appropriateness of the 10% indicator range value.

While the above test data will be used as baseline confirmation of mass emission compliance at full load, additional full load testing will be conducted to supplement the data set with data points collected while operating at or near the 10% opacity threshold. These points will be established by "de-tuning" the electrostatic precipitator (making adjustments to operating parameters of the precipitator) and/or making other operational adjustments to the unit to increase the particulate mass loading and opacity downstream of the precipitator. The data set used to establish the opacity/mass relationship and the indicator verification shall consist of the previously collected particulate mass emissions data and the data collected during the CAM testing program. The CAM testing at elevated opacity levels will be performed for one 2-hour test run (as opposed to a full 6-hour time period typical of a compliance test). Limiting the data collection to 2-hours will minimize the environmental impacts of operating the particulate control equipment under less than normal operating conditions. Nevertheless, it is understood that more than one run under specific unit operating conditions may be necessary.

Appalachian Power will implement monitoring provisions of the CAM plan within 180 days of the plan being approved in the renewed Title V permit. Further, CAM testing will be performed in a timely manner. The CAM related testing and CAM Plan implementation shall be conducted according to the following schedule:

1. Appalachian Power shall submit a CAM testing protocol to the WV Division of Air Quality at least 30 days prior to stack testing.
2. Appalachian Power shall complete CAM testing and implement the CAM monitoring within 180 days of the issuance of the renewal permit.
3. Test results shall be submitted to the WV Division of Air Quality within 60 days after completion of the testing.

Because CAM testing will be conducted at potentially elevated opacity and particulate mass emission levels, it is possible that excess opacity emissions and potentially excess particulate mass emissions may occur. Appalachian Power requires a written exemption from the WV Division of Air Quality for any excess opacity and/or particulate mass emissions that may result from the test program prior to performing the testing. A separate request for this exemption will be made in writing at the time the test protocol is submitted to the WV Division of Air Quality.

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Attachment I

Reg. 2 and 10 Monitoring and Recordkeeping Plan

45 CSR 2 and 45 CSR 10
Monitoring and Recordkeeping Plan

Mountaineer Plant

Facility Information:

Facility Name: Mountaineer Plant

Facility Address: P.O. Box 419
State Route 62
New Haven, WV 25265

Facility Environmental Contact: S. F. Wells

A. Facility Description:

Mountaineer Plant is a coal-fired electric generating facility with one main combustion unit (Unit 1) discharging through a single main stack (MT1). Mountaineer plant also has two auxiliary boilers (Aux. 1 and 2) that discharge through an independent auxiliary stack (CS012). Unit 1, Aux. Boiler 1 and Aux. Boiler 2 each have a design heat input greater than 10 mmBtu/hr making both 45 CSR 2A (Interpretive Rule for 45 CSR 2) and 45 CSR 10A (Interpretive Rule for 45 CSR 10) applicable to these sources. However, each of these boilers are regulated by subpart D of the New Source Performance Standards and have limited applicability under 45 CSR 10 and 45 CSR 10A.

I. 45 CSR 2 Monitoring Plan:

In accordance with Section 8.2.a of 45 CSR 2, following is the proposed plan for monitoring compliance with opacity limits found in Section 3 of that rule:

A. Main Stack (MT1)

1. Applicable Standard:

45 CSR 2, §3.1. *No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.*

2. Monitoring Method(s):

45 CSR 2, §8.2.a.1. *Direct measurement with a certified continuous opacity monitoring system (COMS) shall be deemed to satisfy the requirements for a monitoring plan. Such COMS shall be installed, calibrated, operated and maintained as specified in 40 CFR*

Part 60, Appendix B, Performance Specification 1 (PS1). COMS meeting the requirements of 40 CFR Part 75 (Acid Rain) will be deemed to have satisfied the requirements of PS1.

a. Primary Monitoring Method: While a Continuous Opacity Monitor System (COMS) would not be required on a wet scrubbed fuel burning unit, Mountaineer has chosen to employ COMS on the fuel burning unit upstream of the wet scrubber and located in the plant ductwork. As such, the primary method of monitoring opacity at Mountaineer Plant will be COMS. The COMS are installed, maintained and operated in compliance with requirements of 40 CFR Part 75.

b. Other Credible Monitoring Method(s): While Mountaineer Plant will use COMS as the primary method of monitoring opacity of the fuel burning unit, we are also reserving the right to use Method 9 readings or any other appropriate method that would produce credible data. These "other monitoring methods" will generally be used in the absence of COMS data or as other credible evidence used in conjunction with COMS data.

3. Recordkeeping:

a. **Operating Schedule and Quality/Quantity of Fuel Burned**

45 CSR 2A §7.1.a. *The owner or operator of a fuel burning unit(s) shall maintain records of the operating schedule, and the quality and quantity of fuel burned in each fuel burning unit as specified in paragraphs 7.1.a.1 through 7.1.a.6, as applicable.*

The applicable paragraphs for Mountaineer Plant are the following:

§7.1.a.2: *For fuel burning unit(s) which burn only distillate oil, such records shall include, but not be limited to, the date and time of start-up and shutdown, the quantity of fuel consumed on a monthly basis and a BTU analysis for each shipment.*

§7.1.a.4: *For fuel burning unit(s) which burn only coal, such records shall include, but not be limited to, the date and time of start-up and shutdown, the quantity of fuel consumed on a daily basis and an ash and BTU analysis for each shipment.*

§7.1.a.6: *For fuel burning unit(s) which burn a combination of fuels, the owner or operator shall comply with the applicable Recordkeeping requirements of paragraph 7.1.a.1 through 7.1.a.5 for each fuel burned.*

The date and time of each startup and shutdown of Unit 1 will be maintained. The quantity of coal burned on a daily basis as well as the ash and Btu content will also be maintained. From a fuel oil perspective, the quantity of fuel oil burned on a monthly basis, as well as the Btu content will be maintained. The fuel oil analysis will generally be one that is provided by the supplier for a given shipment but in some cases, we may

use independent sampling and analyses. The quantity of fuel oil burned on a monthly basis may be maintained on a facility wide basis.

b. **Record Maintenance**

45 CSR 2A §7.1.b. *Records of all required monitoring data and support information shall be maintained on-site for a period of at least five (5) years from the date of monitoring, sampling, measurement or reporting. Support information includes all calibration and maintenance records and all strip chart recordings for continuous monitoring instrumentation, and copies of all required reports.*

Records of all required monitoring data and support information will be maintained on-site for at least five (5) years. Support information includes all calibration and maintenance records and all strip chart recordings for continuous monitoring instrumentation, and copies of all required reports.

4. Exception Reporting:

a. **Particulate Mass Emissions:**

45 CSR 2A, §7.2.a. *With respect to excursions associated with measured emissions under Section 4 of 45CSR2, compliance with the reporting and testing requirements under the Appendix to 45CSR2 shall fulfill the requirement for a periodic exception report under subdivision 8.3.b. or 45CSR2*.

Mountaineer Plant will comply with the reporting and testing requirements specified under the Appendix to 45 CSR 2.

b. **Opacity:**

45 CSR 2A, §7.2.b. *COMS – In accordance with the provisions of this subdivision, each owner or operator employing COMS as the method of monitoring compliance with opacity limits shall submit a "COMS Summary Report" and/or an "Excursion and COMS Monitoring System Performance Report" to the Director on a quarterly basis; the Director may, on a case-by-case basis, require more frequent reporting if the Director deems it necessary to accurately assess the compliance status of the fuel burning unit(s). All reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter. The COMS Summary Report shall contain the information and be in the format shown in Appendix B unless otherwise specified by the Director.*

45 CSR 2A, §7.2.b.1. *If the total duration of excursions for the reporting period is less than one percent (1%) of the total operating time for the reporting period and monitoring system downtime for the reporting period is less than five percent (5%) of the total operating time for the reporting period, the COMS Summary Report shall be submitted to the Director; the Excursion and COMS Monitoring System Performance report shall be maintained on-site and shall be submitted to the Director upon request.*

45 CSR 2A, §7.2.b.2. *If the total duration of excursions for the reporting period is one percent (1%) or greater of the total operating time for the reporting period or the total monitoring system downtime for the reporting period is five percent (5%) or greater of the total operating time for the reporting period, the COMS Summary Report and the Excursion and COMS Monitoring System Performance Report shall both be submitted to the Director.*

45 CSR 2A, §7.2.b.3. *The Excursion and COMS Monitoring System Performance Report shall be in a format approved by the Director and shall include, but not be limited to, the following information:*

45 CSR 2A, §7.2.b.3.A. *The magnitude of each excursion, and the date and time, including starting and ending times, of each excursion.*

45 CSR 2A, §7.2.b.3.B. *Specific identification of each excursion that occurs during start-ups, shutdowns, and malfunctions of the facility.*

45 CSR 2A, §7.2.b.3.C. *The nature and cause of any excursion (if known), and the corrective action taken and preventative measures adopted (if any).*

45 CSR 2A, §7.2.b.3.D. *The date and time identifying each period during which quality-controlled monitoring data was unavailable, except for zero and span checks, and the reason for data unavailability and the nature of the repairs or adjustments to the monitoring system.*

45 CSR 2A, §7.2.b.3.E. *When no excursions have occurred or there were no periods of quality-controlled data unavailability, and no monitoring systems were inoperative, repaired, or adjusted, such information shall be stated in the report.*

Attached, as Appendices A and B are sample copies of the COMS "Summary Report" and "Excess opacity and COMS downtime report" that we plan on using to fulfill the opacity reporting requirements. The COMS "Summary Report" will satisfy the conditions under 45 CSR 2A, §7.2.b for the "COMS Summary Report" and will be submitted to the Director according to its requirements. The "Excess opacity and COMS downtime report" satisfies the conditions under 45 CSR 2A, §7.2.b.3. for the "Excursion and COMS Monitoring System Performance Report". The "Excess opacity and COMS downtime report" shall be submitted to the Director following the conditions outlined in 45 CSR 2A, §7.2.b.1. and §7.2.b.2.

To the extent that an excursion is due to a malfunction, the reporting requirements in section 9 of 45CSR2 shall be followed – 45 CSR 2A, §7.2.d.

B. <u>Aux. Stack (CS012)</u>

1. Applicable Standard:

45 CSR 2, §3.1. *No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.*

2. Monitoring Method:

45 CSR 2, §8.2.a.1. *Direct measurement with a certified continuous opacity monitoring system (COMS) shall be deemed to satisfy the requirements for a monitoring plan. Such COMS shall be installed, calibrated, operated and maintained as specified in 40 CFR Part 60, Appendix B, Performance Specification 1 (PS1). COMS meeting the requirements of 40 CFR Part 75 (Acid Rain) will be deemed to have satisfied the requirements of PS1.*

45 CSR 2, §8.4.a. *The owner or operator of a fuel burning unit(s) may petition for alternatives to testing, monitoring, and reporting requirements prescribed pursuant to this rule for conditions, including, but not limited to, the following:*

45 CSR 2, §8.4.a.1. *Infrequent use of a fuel burning unit(s)*

Pursuant to 45 CSR 2, Section 8.4.a and 8.4.a.1, Mountaineer Plant previously petitioned the Office of Air Quality (OAQ) Chief for alternative testing, monitoring, and reporting requirements for the auxiliary boiler and associated stack. Based on limited operating hours, the requirement for COMS installation per Section 6.2.a of interpretive rule 45 CSR 2A was determined to be overly burdensome and sufficient reason for the granting of alternative monitoring methods. The alternative monitoring method based on USEPA Method 9 visible emission readings is described below.

- Primary Monitoring Method: As an alternative to COMS monitoring, a Method 9 reading shall be conducted one time per month provided the following conditions are met: 1) The auxiliary boiler(s) has operated at normal, stable load conditions for at least 24 consecutive hours and 2) weather/lighting conditions are conducive to taking proper Method 9 readings. With the Mountaineer auxiliary boilers being sans particulate emissions controls, operating parameters of control equipment are nonexistent and unable to be monitored.

3. Recordkeeping:

a. **Operating Schedule and Quality/Quantity of Fuel Burned**

45 CSR 2A §7.1.a. *The owner or operator of a fuel burning unit(s) shall maintain records of the operating schedule, and the quality and quantity of fuel burned in each fuel burning unit as specified in paragraphs 7.1.a.1 through 7.1.a.6, as applicable.*

The applicable paragraph for the Mountaineer Plant auxiliary boilers follows:

§7.1.a.2: *For fuel burning unit(s) which burn only distillate oil, such records shall include, but not be limited to, the date and time of start-up and shutdown, the quantity of fuel consumed on a monthly basis and a BTU analysis for each shipment.*

As such, the date and time of each startup and shutdown of the auxiliary boilers will be maintained. The quantity of fuel oil burned on a monthly basis, as well as the Btu content will be maintained. The fuel oil analysis will generally be one that is provided by the supplier for a given shipment but in some cases, we may use independent sampling and analyses. The quantity of fuel oil burned on a monthly basis may be maintained on a facility wide basis.

b. **Record Maintenance**

45 CSR 2A §7.1.b. *Records of all required monitoring data and support information shall be maintained on-site for a period of at least five (5) years from the date of monitoring, sampling, measurement or reporting. Support information includes all calibration and maintenance records and all strip chart recordings for continuous monitoring instrumentation, and copies of all required reports.*

Records of all required monitoring data and support information will be maintained on-site for at least five (5) years. In the case of the auxiliary boilers, strip chart recordings, etc. are generally not available.

4. Exception Reporting:

Pursuant to 45 CSR 2, Section 8.4.a and 8.4.a.1, Mountaineer Plant previously petitioned the Office of Air Quality (OAQ) Chief for alternative testing, monitoring, and reporting requirements for the auxiliary boiler and associated stack.

a. **Particulate Mass Emissions** – As an alternative to the testing and exception reporting requirements for particulate mass emissions from the auxiliary boilers, the following was previously proposed and approved. Based on an average heat content of approximately 138,506 Btu/gallon (calendar year 2000 data) and an AP-42 based particulate mass emissions emission factor of 2 lbs/thousand gallons, the calculated particulate mass emissions of the auxiliary boiler are 0.01 lb/mm Btu. As such, the fuel analysis records maintained under the fuel quality analysis and recordkeeping section of this plan provide sufficient evidence of compliance with the particulate mass emission limit. For the purpose of meeting exception reporting requirements, any fuel oil analysis indicating a heat content of less than 25,000 Btu per gallon will be reported to the OAQ to fulfill the requirement for a periodic exception report under subdivision 8.3.b. or 45 CSR 2 – 45 CSR 2A, §7.2.a. A heat content of 25,000 Btu/gal and a particulate emissions factor of 2 lbs/thousand gallons would result in a calculated particulate mass emissions of approximately 90% of the applicable 45 CSR 2 standard.

b. **Opacity** – As an alternative to the exception reporting requirements for opacity emissions from the auxiliary boiler, we are proposing the following. We will maintain a

copy of each properly conducted (correct weather/lighting conditions, etc.) Method 9 evaluation performed. Any properly conducted Method 9 test that indicates an exceedance shall be submitted to the OAQ on a quarterly basis (within 30 days of the end of the quarter) along with an accompanying description of the excursion cause, any corrective action taken, and the beginning and ending times for the excursion.

To the extent that an excursion is due to a malfunction, the reporting requirements in section 9 of 45CSR2 shall be followed – 45 CSR 2A, §7.2.d.

If no exceptions have occurred during the quarter, then a report will be submitted to the OAQ stating so. This will include periods in which no method 9 tests were conducted (e.g. unit out of service) or when no fuel oil was received.

II. 45 CSR 10 Monitoring Plan:

A. Main Boiler (MT1)

The Mountaineer main boiler is regulated by Part 60 Subpart D New Source Performance Standards and does not have a SIP limit in section 3 of 45 CSR 10. Accordingly, a monitoring plan demonstrating compliance with weight emission standards in section 3 is not required for the main boiler

B. Aux. Stack (CS012)

1. Applicable Standard:

45 CSR 10, §3.3.f. *For type 'b' and Type 'c' fuel burning units, the product of 3.2 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.*

45 CSR 10, §3.8. *Compliance with the allowable sulfur dioxide emission limitations from fuel burning units shall be based on continuous twenty-four (24) hour averaging time…A continuous twenty-four (24) hour period is defined as one (1) calendar day.*

2. Monitoring, Recordkeeping, Exception Reporting Requirements:

45 CSR 10, §10.3. *The owner or operator of a fuel burning unit(s) which combusts natural gas, wood or distillate oil, alone or in combination, shall be exempt from the requirements of section 8.*

As such, Mountaineer Plant auxiliary boilers 1 & 2 (CS012) are exempt from Testing, Monitoring, Recordkeeping, and Reporting requirements found in 45 CSR 10, Section 8 because the fuel burning sources combust only distillate oil. 45 CSR 10, Section 8 also contains the requirement for the development of a monitoring plan. The simple nature of burning distillate oil results in an SO_2 emission rate well below the standard.

While fuel sampling and analysis may continue to be performed at this facility, it is done so at the discretion of the owner/operator and is not required by this monitoring plan for the purposes of indicating compliance with SO_2 standards.

Revisions of Monitoring Plan:

Mountaineer Plant reserves the right to periodically revise the conditions of this monitoring plan. Any revised plan will become effective only after approval by the OAQ.

Implementation of Monitoring Plan:

This revised plan was implemented in concurrence with the installation and operation of the new stack for Unit 1 at Mountaineer Plant.

Appendix A
Sample COMS Summary Report

SUMMARY REPORT

Table 3

Pollutant	Opacity
Company	Appalachian Power Company - Mountaineer Plant PO Box 419 New Haven, WV 25265

Emission Limitation

Regulation	Limit	Units	Period
45 CSR 2	10	%	6 minute average
40 CFR 60	20	%	6 minute average

Total Source Operating Time: 132,480 Minutes

Reporting Period: Quarter	7/1/2023 to 9/30/2023
Monitor Manufacturer:	Teledyne/Monitor Labs
Model Number:	560
Date of Last Certification or Audit:	1/29/2021
Process Unit(s) Description:	Coal Fired

Emissions Data Summary

		45 CSR 2		40 CFR 60 D	
1.	Duration of excess emissions in reporting period due to:				
	a. Startup / Shutdown	0	minutes	0	minutes
	b. Soot Blowing	0	minutes	0	minutes
	c. Control Equipment Problems	0	minutes	0	minutes
	d. Process Problems	0	minutes	0	minutes
	e. Other Known Causes	0	minutes	0	minutes
	f. Unknown Causes	0	minutes	0	minutes
2.	Total Duration	0	minutes	0	minutes
3.	Percent Excess Emission	0.00	%	0.00	%

% Excess = 100 * (Total Duration / Tot. Source Oper. Time)

CMS Performance Summary

1.	CMS Downtime in reporting period due to:		
	a. Monitor Equipment Malfunction	0	minutes
	b. Other Equipment Malfunction	0	minutes
	c. Quality Assurance Calibration	708	minutes
	d. Other known Causes	0	minutes
	e. Unknown Causes	0	minutes
2.	Total CMS Downtime	708	minutes
3.	Percent CMS Downtime	0.53	%

% Downtime = 100 * (Total CMS Downtime / Total Source Operating Time)

Please Note:
1. Separate Summary Reports are required for each boiler in the system when it has separate monitoring equipment.
2. Total source operating time is all times when gases are flowing past the specified monitor, whether that monitor is functional or not.
3. All times for opacity must be reported in minutes. All times for gases may be reported in hours.
4. On a separate page describe any changes since the last reporting period in the CEMS process or controls.
5. Other reports may be necessary to meet permit requirements.

Appendix B
Sample Excess Opacity and COMS Downtime Report

Opacity 6-Minute Excess Emission Report

Unit 1 Duct

From: 07/01/2023 00:00 **To:** 09/30/2023 23:59 **Facility Name:** Mountaineer
Generated: 10/26/2023 06:34 **Location:** New Haven, WV

AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY™

Tag Name: U1D_Opac_Pct_6M
Total Operating Time: 132,480 Minute(s) **No Exclusions Allowed**
Non-Operating Time: 0 Minute(s) Report Time: 132,480 Minute(s)

No incidents have been reported for this reporting period. Data is 100% in compliance.

Total Operating Time:	**132,480.00 Minute(s)**
Total Duration (Unit Up or Down):	**0.00 Minute(s)**
Time in exceedance as a percentage of operating time:	**0.00 %**
Time in compliance as a percentage of operating time:	**100.00 %**

Attachment J

Suggested Permit Language

Requested Changed to the Permit:

No recommended changes for sections 6.0, 7.0 or 8.0.

The following changes to the permit are requested:

Section 1.1 Table

1. Remove the following Reference to Conveyor M5 from the permit in Table 1.1 found on Page 5 of 11 in the current permit and noted in yellow highlight in the Attachment D on Page 3:

2. On Page 3 of Attachment D, note the renaming and revision to the silo unloading equipment and transfer these changes into the table in Permit Section 1.1.

3. Remove the reference to Tank 61 from the table in Permit Section 1.1 as noted on Page 6 of Attachment D. This tank has been permanently removed from the facility.

4. Remove the reference to Tank 57 from the table in Permit Section 1.1 as noted on Page 6 of Attachment D. This device is the same tank as Tank 59 (see Attachment E for Systems 10S and 11S for more details)

5. Rename Tank 59 to SO3 Mitigation Trona or Hydrated Lime Silo as noted in Attachment D of this application and note this equipment is used in systems 10S or 11S in the Table in Permit Section 1.1.

6. Please note the other highlighted revisions in Attachment D and make those corrections to the table in Section 1.1 of the Permit.

Section 4

Remove Section 4.4.5 as the referenced section that it applies to (4.1.27) has been reserved in the permit due to the removal of the equipment orignially referenced in that Section.

~~4.4.5. For the purposes of determining compliance with condition 4.1.27 of this permit, the permittee shall maintain monthly records of the number of hours the emergency quench pump is operated. These records shall be maintained on site for a period of not less than five (5) years. The records shall be certified and made available to the Director or a duly authorized representative of the Director upon request.~~

Section 5

Remove Sections 5.1.2 and 5.1.3, 5.2, and 5.4.1 from the permit as they only apply to Conveyor M5, which no longer exists.

5.0. Source-Specific Requirements [Coal and Ash Handling (Emission points listed in section 1.0. Table)]

5.1. Limitations and Standards

5.1.1 The Coal and Ash handling systems are subject to 45CSR§2-5 as outlined in the facility wide section of this permit (condition 3.1.12) regarding fugitive dust control system.

~~5.1.2 The permitted facility (Emission Unit ID# 15S-Conveyor C-M5) shall comply with all the applicable standard provisions of the 40CFR60 Subpart Y Standards of Performance for Coal Preparation Plants, provided, however, that compliance with any more stringent limitations, is demonstrated:~~

~~On and after the date on which the performance test required to be conducted by 40 C.F.R. § 60.8 is completed, an owner or operator subject to the provisions of 40 C.F.R. Part 60 Subpart Y shall not cause tobe discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.~~
~~[45CSR16 & 40CFR§60.254 (a), C-M5]~~

~~5.1.3. The amount of coal unloaded from the mine conveyor (M5) shall not exceed 1800 tons per hour nor 3,000,000 tons per year based on a 12 month rolling total.~~
~~[45CSR13, R13-0075, 4.1.19]~~

5.2. Monitoring Requirements

~~5.2.1. To demonstrate compliance with condition 5.1.2, the permittee shall perform monthly visible emissions observations. The monthly visible emission observations shall consist of Method 22 like visible emissions checks. The checks shall be performed during periods of normal operation and appropriate weather conditions, and for a sufficient time interval, but no less than one minute, to determine if any visible emissions are present. If visible emissions are observed, the permittee shall conduct an opacity evaluation in accordance with Method 9 of 40 CFR 60, Appendix A within 24 hours unless the visible emissions are corrected beforehand.~~
~~[45CSR§30-5.1.c.]~~

Add the following langugage to replace the struck language:

None

5.3. Testing Requirements

None

5.4. Recordkeeping Requirements

~~5.4.1 For the purposes of determining compliance with Section 5.1.3, the permittee shall maintain monthly records of the amount of coal received from the mine conveyor. These records shall be maintained on site for a period of not less than five (5) years and certified records shall be made available to the Director or a duly authorized representative of the Director upon request.~~
~~[45CSR13, R13-0075, 4.2.15]~~

Add the following langugage to replace the struck language:

None