

Fact Sheet



For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-05300009-2014**
Application Received: **10/18/2013**
Plant Identification Number: **05300009**
Permittee: **Appalachian Power Company**
Facility Name: **Mountaineer Plant**
Mailing Address: **1 Riverside Plaza, Columbus, OH 43215**

Physical Location: New Haven, Mason County, West Virginia
UTM Coordinates: 419.04 km Easting • 4314.70 km Northing • Zone 17

Directions: From Charleston take Interstate 77 North to Exit 138. Travel west on Route 62 approximately 24 miles to New Haven. Facility is located on the right one mile east of New Haven in Mason County.

Facility Description

The Mountaineer Plant is a fossil fuel fired electric generation facility and operates under Standard Industrial Classification (SIC) code 4911. The facility consists of one (1) coal-fired steam generator with a rated design capacity of 11,960 mm Btu/hr, two (2) oil-fired auxiliary boilers with a rated design capacity of 598 mm Btu/hr each, various supporting operations such as coal handling and ash handling, and various tanks with insignificant emissions. The facility has the potential to operate seven (7) days per week, twenty-four (24) hours per day and fifty-two (52) weeks per year.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2013 Actual Emissions
Carbon Monoxide (CO)	1895	561.91
Nitrogen Oxides (NO _x)	46150	1876.77
Particulate Matter (PM _{2.5})	2325	426.2
Particulate Matter (PM ₁₀)	2495	127.1
Total Particulate Matter (TSP)	5355	307.88
Sulfur Dioxide (SO ₂)	79294	2903.66
Volatile Organic Compounds (VOC)	225	67.06

PM₁₀ is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2013 Actual Emissions
Arsenic	1.93	0.0306
Beryllium	0.11	0.004
Chromium	1.81	0.193
Cobalt	0.55	0.02
Manganese	2.19	0.0717
Mercury	0.32	0.0101
Nickel	1.57	0.155
Selenium	4.95	0.740
Hydrochloric Acid	4562	6.17
Hydrofluoric Acid	570	5.60

Title V Program Applicability Basis

This facility has the potential to emit 79,294 TPY of SO₂, 46,150 TPY NO_x, 2495 tons per year PM₁₀, 1895 tons per year CO, 225 tons per year VOC, more than 10 tons per year of a single hazardous air pollutant (HAP), and more than 25 tons per year of aggregate HAPs. Due to this facility's potential to emit over 100 tons per year of criteria pollutants, over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, Mountaineer Plant is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30. This facility is also subject to 40 CFR 60 (NSPS) requirements as well as Title IV (Acid Rain) requirements and therefore is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Control of particulate matter emissions from indirect heat exchangers.
	45CSR6	Open burning prohibited.
	45CSR10	Control of sulfur dioxide emissions from indirect heat exchangers.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Permits for Construction, Modification, Relocation and Operation of Stationary sources
	45CSR16	Standards of Performance for New Stationary Sources Pursuant to 40 CFR Part 60
	45CSR30	Operating permit requirement.
	45CSR33	Acid Rain Provisions and Permits
	45CSR34	Emission Standards for Hazardous Air Pollutants
	45CSR38	Determination of Compliance With Air Quality Management Rules
	40 CFR 60, Subpart D	Standards of performance for Fossil Fuel Fired Steam Generators
	40 CFR 60, Subpart OOO	Standards of Performance for Nonmetallic Mineral Processing Plants
	40 CFR 60, Subpart Y	Standards of Performance for Coal Preparation Plants
	40 CFR 61	Asbestos inspection and removal
	40 CFR 64	Compliance Assurance Monitoring
	40 CFR Part 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters
	40 CFR Part 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units
	40 CFR 63, Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
	40 CFR 72	Permits Regulation
	40 CFR 73	Sulfur Dioxide Allowance System Permits Regulation
	40 CFR 74	Sulfur Dioxide Opt-ins
	40 CFR 75	Continuous Emissions Monitoring
	40 CFR 76	Nitrogen Oxides Reduction Program
	40 CFR 77	Excess Emissions
	40 CFR78	Appeals Procedure for Acid Rain Program
	40 CFR§60.13(i)(2)	Letter of approval to AEP dated June 9, 1999 for Alternative Monitoring Request

	40 CFR 82, Subpart F	Ozone depleting substances
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
State Only:	45CSR4	No objectionable odors.
	45CSR 39	Control of annual Nitrogen Oxide emissions
	45CSR 40	Control of ozone season Nitrogen Oxide Emissions
	45CSR 41	Control of annual Sulfur Dioxide emissions

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R13-0075G	9/28/2009	
R33-6264-2017-4A	5/14/2013	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

- Tank#17, Tank#18 and Tank# 19 have been updated. Tank#3, Tank#8, Tank#20 and Tank#21 have been removed. Tanks #22A & 22B have been added in the Emission Unit Table. The original tank 22 was replaced in 1990 with two contained above ground storage tanks (22A & 22B).
- **45CSR26 - NO_x Budget Trading Program as A Means of Control and Reduction of Nitrogen Oxides from Electric Generating Units**
 The NO_x Budget Trading Program was repealed on June 1, 2009, therefore Appendix A: Mountaineer Plant NO_x Budget Permit Application was removed.
- **45CSR37 – Mercury Budget Trading Program To Reduce Mercury Emissions**
 Condition 3.1.13 was removed since 45CSR37, Mercury Budget Trading Program, was repealed on June 1, 2009. This also led to the removal of Appendix E: Compliance Order# CO-R37-C-2008-4.
- **40 CFR 63, Subpart UUUUU - National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units (EGU)**
 The Steam Generator Unit 1(Emission Unit ID-1S) is subject to the requirements of Subpart UUUUU which establishes national emission limitations and work practice standards for hazardous air

pollutants (HAP) emitted from coal- and oil-fired EGUs. The placeholder language has been added to this permit as condition 4.1.28 for the Electric Utility Steam Generating Units (EGU) MACT, 40 C.F.R. 63, Subpart UUUUU. The existing source compliance date is April 16, 2015.

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

The “Aux 1” and “Aux 2” are subject to the requirements of 40 CFR 63 Subpart DDDDD. The placeholder language has been added to this permit as condition 4.1.29 for the Industrial, Commercial, and Institutional Boilers and Process Heaters MACT, 40 C.F.R. 63, Subpart DDDDD. The existing source compliance date is January 31, 2016 for the Boiler MACT.

- **40 CFR Part 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

The quench pump emergency engine (*Emission Point ID-4E*) is less than 500hp, located at a major source. The quench pump engine was installed as part of the FGD project at Mountaineer. While the FGD project was not operational until early 2007, the notification of the start of construction was submitted to WVDEP in January 2006. The commencement of construction prior to June 12, 2006 would make it an existing, emergency compression ignition engine located at a major source and therefore subject to Subpart ZZZZ. These requirements have been included in section 8 of this permit.

- Since the frequency of retesting is dependent upon the test results of the previous testing and since it is possible that more than one series of tests may be required during the permit term (e.g. tests are required annually, once /2 years or once /3 years), the language in Condition 4.3.1 has been revised to exclude the dates of the last tests. Instead, the testing schedule and next test dates are included here in the fact sheet.

Next PM test date for Unit 1 (once /3 years) scheduled for 4/10/2015.

- **40CFR Part60, Subpart Y-** Due to changes to the regulation on October 8, 2009, 40CFR Part60, Subpart Y citations have been updated in section 5 of this permit.

- **40 CFR Part 64** – This is a 2nd renewal. Since CAM was addressed in the first renewal and there were no modifications to the facility that would have triggered a CAM review subsequent to the first renewal, a CAM evaluation was not made.

- Requirements 3.1.18 and 3.4.10 (45CSR§§42-3.1, 4.1, 4.2, and 4.5) were deleted because 45CSR42 was repealed by S.B.253 on June 1, 2012.

- The limestone handling system consists of two parts, the limestone material handling system (5S) and the limestone processing system (7S). The equipment making up source 7S is subject to 40 CFR Part 60 Subpart OOO since the limestone is crushed in this section of equipment from the drop from the limestone storage pile to the day bins. The equipment making up source 5S is not subject to 40 CFR Part 60 Subpart OOO since there is no processing of the limestone in the equipment from the barge unloader to the storage pile. Due to changes to the regulation on April 28, 2009, 40 CFR Part 60 Subpart OOO requirements have been updated in section 6 of this permit.

- Condition 6.4.3 has been removed from the permit since there is no applicable wet scrubber. Condition 6.2.1 has been added for visible emission monitoring to demonstrate compliance with the opacity limits of condition 6.1.1.

- Per company’s request, a diesel fired emergency fire pump (*Emission Point ID- 5E*) has been added to the Emission Unit Table. It is classified as an existing, emergency compression ignition engine with a rating less than 500 hp located at a major source. Applicable requirements have been added to section 8 of this permit.

- CAIR Permit Application has been updated on August 25, 2014.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

40 CFR 63 Subpart Q	The Mountaineer Plant cooling tower does not use chromium based water treatment chemicals.
40 C.F.R. 60 Subpart Da	The Mountaineer Plant electric utility steam generating unit commenced construction prior to September 18, 1978 and has not undergone a “modification” as defined in 40 C.F.R. 60.
40 C.F.R. 60 Subpart K, Ka	There are no tanks containing “Petroleum Liquids” that are greater than 40,000 gallons in capacity.
40 C.F.R. 60 Subpart Kb	All tanks storing volatile organic liquids are below 19,812 gallons in capacity.
40 C.F.R. 60 Subpart Y	All other sections of the existing conveyor system except Conveyor M5 are not Subpart Y facilities per § 60.250(b) because they were constructed before October 24, 1974.
40 C.F.R. 60 Subpart OOO	The equipment making up source (5S) is not subject to 40 CFR Part 60 Subpart OOO since there is no processing of the limestone in the equipment from the barge unloader to the storage pile.
45CSR5	The Rule to Prevent and Control Air Pollution from the Operation of Coal Preparation Plants, Coal Handling Operations, and Coal Disposal Areas is not applicable to the facility since 45CSR2 applies.
45CSR17	The Rule to Prevent and Control Particulate Matter Air Pollution from Material Handling Preparation, Storage, and Other Sources of Fugitive Particulate Matter is not applicable to the facility because 45CSR2 is applicable

Request for Variances or Alternatives

None

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: August 29, 2014
 Ending Date: September 29, 2014

Point of Contact

All written comments should be addressed to the following individual and office:

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Division of Air Quality
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Charleston, WV 25304
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Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)

None