

# Fact Sheet



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

This facility is slated to be retired and decommissioned by Appalachian Power Company. Due to an ongoing review by the Public Service Commission of West Virginia and the uncertainty of the outcome and date of said outcome, the retirement and decommissioning has been delayed. Also, in light of a Memorandum of Understanding (MOU) between the WV Division of Air Quality and the US Environmental Protection Agency, this Title V Renewal Permit is being processed in order to meet the milestones of that MOU.

Permit Number: **R30-03900006-2015**  
Application Received: **November 27, 2013**  
Plant Identification Number: **03-054-039-00006**  
Permittee: **Appalachian Power Company (d.b.a. American Electric Power)**  
Facility Name: **Kanawha River Plant**  
Mailing Address: **1 Riverside Plaza, Columbus, Ohio 43215**

*Revised: NA*

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Physical Location:	Glasgow, Kanawha County, West Virginia
UTM Coordinates:	426.96 km Easting • 4228.62 km Northing • Zone 17
Directions:	From Charleston take Interstate 77 South [I-64 East] and take Exit 85. Travel across the bridge crossing the Kanawha River and turn right onto US 60 towards Cedar Grove for approximately 5 miles to Glasgow. Facility is located on the right approximately ½ mile east of Glasgow.

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### Facility Description

The Kanawha River Plant is a fossil fuel fired electric generation facility and operates under Standard Industrial Classification (SIC) code 4911. The facility consists of two (2) coal-fired steam generators with a rated design capacity of 1950 mmBtu/hr each, various supporting operations such as coal handling, 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**

<b>Plantwide Emissions Summary [Tons per Year]</b>		
<b>Regulated Pollutants</b>	<b>Potential Emissions</b>	<b>2013 Actual Emissions</b>
Carbon Monoxide (CO)	1,355	108
Nitrogen Oxides (NO <sub>x</sub> )	16,910	1248
Particulate Matter (PM <sub>2.5</sub> )	258	10
Particulate Matter (PM <sub>10</sub> )	588	25
Total Particulate Matter (TSP)	899	46
Sulfur Dioxide (SO <sub>2</sub> )	27,331	6833
Volatile Organic Compounds (VOC)	298	13
<i>PM<sub>10</sub> is a component of TSP.</i>		
<b>Hazardous Air Pollutants</b>	<b>Potential Emissions</b>	<b>2013 Actual Emissions</b>
Hydrogen Chloride	3,596	388
Hydrogen Fluoride	312	26
Selenium	14.11	0.67
Other Miscellaneous HAPs	8.43	0.41

*Some of the above HAPs may be counted as PM or VOCs.*

**Title V Program Applicability Basis**

Due to this facility’s potential to emit over 100 tons per year of criteria pollutants (i.e., SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>, CO and VOC), over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, Kanawha River Plant 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  | To Prevent And Control Particulate Air Pollution From Combustion Of Fuel In Indirect Heat Exchangers |
| 45CSR6  | Control Of Air Pollution From Combustion Of Refuse   |
| 45CSR10 | To Prevent And Control Air Pollution From The Emission Of Sulfur Oxides                              |
| 45CSR11 | Prevention Of Air Pollution Emergency Episodes   |
| 45CSR30 | Requirements For Operating Permits   |

45CSR33	Acid Rain Provisions and Permits
45CSR34	Emission Standards For Hazardous Air Pollutants
45CSR38	Provisions For Determination Of Compliance With Air Quality Management Rules
WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
40 C.F.R. Part 61, Subpart M	National Emission Standard For Asbestos
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 C.F.R. Part 64	Compliance Assurance Monitoring
40 C.F.R. Part 72	Permits Regulation
40 C.F.R. Part 73	Sulfur Dioxide Allowance System Permits Regulation
40 C.F.R. Part 74	Sulfur Dioxide Opt-ins
40 C.F.R. Part 75	Continuous Emissions Monitoring
40 C.F.R. Part 76	Acid Rain Nitrogen Oxides Emission Reduction Program
40 C.F.R. Part 77	Excess Emissions
40 C.F.R. Part 78	Appeals Procedure (for Acid Rain Program)
40 C.F.R. Part 82, Subpart F	Ozone depleting substances
40 C.F.R. Part 97, Subpart AAAAA	TR NO <sub>x</sub> Annual Trading Program
40 C.F.R. Part 97, Subpart BBBBB	TR NO <sub>x</sub> Ozone Season Trading Program
40 C.F.R. Part 97, Subpart CCCCC	TR SO <sub>2</sub> Group 1 Trading Program
<u>State Only:</u>	
45CSR4	To Prevent And Control The Discharge Of Air Pollutants Into The Open Air Which Causes Or Contributes To An Objectionable Odor Or Odors
WVDAQ Letter	Letter dated September 3, 2002 addressed to Mr. Greg Wooten and signed by Jesse D. Adkins regarding the thermal decomposition of boiler cleaning solutions.
WVDAQ Letter	Letter dated January 21, 2004 addressed to Mr. Frank Blake and signed by Jesse D. Adkins regarding the combustion of Demineralizer Resins.

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> )
R33-3936-2017-4A	5/14/13	Effective Dates: 1/1/2013 to 12/31/2017

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**

- ❖ This is a renewal of the Title V permit which was issued on May 28, 2009 and Administratively Amended on June 14, 2012. Changes to the most recent version of the Title V Permit include the following:

#### **1) Title V Boilerplate changes**

- Condition 3.3.1. – Subsection “d” was added to this condition. Also section 14 of WV Code §§22-5-4 (a) was added in the citation of authority.
- Conditions 3.5.3. and 3.5.5. - These conditions were revised to require electronic submittal of the annual certification to USEPA. The certification shall now only be submitted to the USEPA by e-mail. Also the USEPA address and office name were updated in condition 3.5.3.

#### **2) Section 1.0 changes:**

- Removed the ash contractor’s name “LMS” from the description of Tank 26 in the “Emission Units” table.

#### **3) Section 3.0 changes:**

- Condition 3.1.5. – This condition was previously “Reserved” and has been replaced with the subsequent condition. Likewise each condition after it has been renumbered.
- Condition 3.1.9. – The requirement to comply with the standard requirements set forth in the Transport Rule (TR) NO<sub>x</sub> Annual Trading Program has been added in this condition. The requirements of the Transport Rule have been added in Appendix E.
- Condition 3.1.10. – This condition was previously “Reserved.” The requirement to comply with the standard requirements set forth in the Transport Rule (TR) NO<sub>x</sub> Ozone Season Trading Program has been added in this condition. The requirements of the Transport Rule have been added in Appendix E.
- Condition 3.1.11. – The requirement to comply with the standard requirements set forth in the Transport Rule (TR) SO<sub>2</sub> Group 1 Trading Program has been added in this condition. The requirements of the Transport Rule have been added in Appendix E.
- Condition 3.1.12. – This condition contained the requirements of 45CSR37 (Mercury Budget Trading Program) which has been repealed. Therefore these requirements have been deleted. This condition now contains the requirements of 45CSR§2-5 (Fugitive Particulate Matter Control).
- Condition 3.1.13. – This condition contained the requirements of 45CSR39 (CAIR NO<sub>x</sub> Annual Trading Program). Since CAIR has been replaced with the Transport Rule trading program, these requirements have been removed from the permit. This condition now contains language for 40 CFR 63 Subpart UUUUU compliance. See discussion below.
- Conditions 3.1.14., 3.1.15. – These conditions contained requirements of 45CSR40 (CAIR NO<sub>x</sub> Ozone Season Trading Program) and 45CSR41 (CAIR SO<sub>2</sub> Trading Program) respectively. Since

CAIR has been replaced with the Transport Rule trading program, these conditions have been deleted from the permit.

- Condition 3.3.1. –The facility is subject to WV Rules 2 and 10 and therefore 45CSR2 and 45CSR10 were added to the citation of authority. Also, since the facility does not have a Rule 13 permit, 45CSR13 was removed from the citation of authority.
- Condition 3.7.2. – The following revisions have been made to the permit shield for non-applicable requirements:
  - 45CSR1 has been repealed and therefore removed from this section.
  - The facility has an emergency fire pump driven by a diesel engine subject to 40 C.F.R. 63 Subpart ZZZZ. Therefore Subpart ZZZZ has been removed from this condition.

**4) Section 4.0 changes:**

- Condition 4.2.5. – The CAM related testing has been previously completed. Therefore, these requirements have been deleted from the renewal permit.
- Condition 4.3.1. – The last PM Compliance test under 45CSR2 was completed on March 28, 2012 and resulted in mass emission rates  $\leq 50\%$  of the weight emission standard. The next retest was required to be performed by March 28, 2015. Since these units were scheduled for retirement by June 1, 2015, a request to postpone the testing beyond June 1, 2015 was granted by the Director on February 11, 2015. Therefore, in the event of a re-start of the units, the compliance testing shall be completed within 180 days of start-up.
- Condition 4.5.5.a. – Added “(Acid Rain Permit is included in Appendix B).”

**5) Section 6.0:** This section was added to the permit for the requirements applicable to the diesel engine fire pump.

**6) APPENDIX B:** This Appendix was previously “Reserved.” It has been determined that the requirements from the Acid Rain Permit or the Acid Rain Permit itself must be included in the Title V permit. Therefore the Acid Rain Permit has been added in Appendix B.

**7) APPENDIX E:** As discussed in Item 3 above (see Conditions 3.1.9., 10., 11., 13., 14., and 15), the CAIR requirements have been replaced with the Transport Rule (TR) requirements in Section 3 of the permit. Likewise, the CAIR Application in Appendix E has been replaced with the TR requirements.

**8) APPENDIX F:** This Appendix contained a WV compliance order pertaining to the Clean Air Mercury Rule (CAMR). CAMR has been repealed and therefore the compliance order is obsolete. Hence, Appendix F has been deleted

❖ **40 CFR 63, Subpart UUUUU - National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units (EGU)**

The Kanawha River Plant’s boilers (Unit 1 and Unit 2) each commenced construction prior to May 3, 2011 and each one is therefore defined as an existing electric utility steam generating unit (EGU). They are 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. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission

limitations. Pursuant to 40 CFR §63.9984(b) an existing EGU must comply with this subpart no later than April 16, 2015. A forty-five (45) day compliance extension was requested and granted which extended the compliance date to June 1, 2015.

Due to the cost prohibitive nature of equipping the facility with environmental controls in order to be in compliance with Subpart UUUUU, Appalachian Power Company had plans to permanently shut down the Kanawha River Plant no later than June 1, 2015 and subsequently retire and decommission the facility. The facility was shut down prior to June 1, 2015. However, due to an order issued by the Public Service Commission of West Virginia (PSC) the permanent retirement and decommissioning of the plant has been put on hold pending a PSC review.

Condition 3.1.13. has been added to the permit which prohibits the operation of Units 1 and/or 2 without being in compliance with Subpart UUUUU upon start-up.

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

Kanawha River Plant's emergency fire pump engine (*Pump Engine 1*) is an existing stationary compression ignition (CI) RICE less than 500 HP located at a major source of HAP emissions and therefore subject to Subpart ZZZZ. These requirements have been included in Section 6.0 of the permit

❖ **40 CFR Part 64** – This is a 2<sup>nd</sup> 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 conducted.

### **Non-Applicability Determinations**

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

- a. **45CSR5 – To Prevent And Control Air Pollution From The Operation Of Coal Preparation Plants, Coal Handling Operations And Coal Refuse Disposal Areas:** The Kanawha River Plant is subject to the requirements of 45CSR2 and is therefore exempt from the provisions of 45CSR5 as outlined in 45CSR§§5-2.4.b. and 2.14.
- b. **45CSR7 – To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations:** The Kanawha River Plant is subject to 45CSR2 and is therefore exempt from the provisions of 45CSR7 as outlined in 45CSR§7-10.1.
- c. **45CSR17 – To Prevent And Control Particulate Matter Air Pollution From Materials Handling, Preparation, Storage And Other Sources Of Fugitive Particulate Matter:** The Kanawha River Plant is subject to the fugitive particulate matter emission requirements of 45CSR2 and is therefore exempt from the provisions of 45CSR17 as outlined in 45CSR§17-6.1.
- d. **40 C.F.R. 60 Subpart D –Standards of Performance for Fossil-Fuel-Fired Steam Generators for which Construction is Commenced After August 17, 1971:** Kanawha River's steam generators commenced construction prior to 1971.
- e. **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:** Kanawha River's steam generators commenced construction prior to September 18, 1978.

- f. 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 18, 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.
- g. 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. §60.111a(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.
- h. 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*: Storage vessels 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.
- i. 40 C.F.R. 60 Subpart Y – *Standards of Performance for Coal Preparation Plants*: The coal handling equipment potentially affected by this rule has not been constructed or modified after October 24, 1974.
- j. 40 C.F.R. 63 Subpart Q – *National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers*: The facility does not include industrial process cooling towers that have operated with chromium-based water treatment chemicals on or after September 8, 1994.

### **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: October 5, 2015  
Ending Date: November 4, 2015

### **Point of Contact**

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

Frederick Tipane  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: 304/926-0499 ext. 1215 • Fax: 304/926-0478  
frederick.tipane@wv.gov

### **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)**

Not applicable.