To: File
From: John Legg
Date: August 10, 2016

Subj: R13-2988B - Class I Administrative Update (to R13-2988A)
Monongahela Power Company
Harrision Station, Haywood, Harrison County, WV
Permit ID No.: R13-2988B
Company ID No.: 033-00015

On July 11, 2016, Monongahela Power Company (Mon Power) submitted a Class I administrative update to permit R13-2988A (issued on May 25, 2016 for the Refined Coal Facility to be installed at the Harrison Power Station). On July 12, 2016, the writer was assigned to the update.

Mon Power submitted the following list of changes to be made to permit R13-2988A:

1) **Page 13, Section 4.0, Source-Specific Requirements**: For clarification, add a notation under Condition 4.1 to indicate that all conditions and references to 40 CFR Part 60, Subpart Y are not applicable to the refined coal process. These conditions and requirements are intended for the Rapid Discharge Rail Unloader (RDRU) process which has yet to be installed, as noted in the permit.

2) **Page 14, Condition 4.1.4**: Correct the total annual throughput of coal for the RDRU facility to 5,000,000 tons per year from 500,000 tons per year.

3) **Page 16, Condition 4.1.13**: Change the word "either" to "any" since there are three main boilers at Harrison.

4) **Pages 16 and 17, Condition 4.1.13 and 4.1.13.c:** Change "urea" to "ammonia" in three (3) separate places since urea is not used in the catalysts.

5) **Page 19, Conditions 4.2.2 through 4.2.5:** Correct condition numbering mistake caused by there being two (2) condition 4.2.2's.

6) **Page 20, Condition 4.3.4**: Add the phrase "Rapid Discharge Rail Unloading" prior to the word "facility" to clarify that the 5,000,000 ton per year limit applies only to the amount of coal to be unloaded by the RDRU.

A compare file is given in Attachment 1 to this engineering memo. The compare file was run to highlight the changes made to R13-2988A to create R13-2988B.

Attachment 1

Compare File

Comparing R13-2988B to R13-2988A

Monongahela Power Company
Harrison Power Station
Haywood, Harrison County, WV

WordPerfect Document Compare Summary

Original document: Q:\AIR_QUALITY\J_LEGG\Monongahela Power Company\R13-2988B\033-00015_PERM_13-2988A.wpd
Revised document: @PFDesktop\:MyComputer\Q:\AIR_QUALITY\J_LEGG\Monongahela Power Company\R13-2988B\033-00015_PERM_13-2988B.wpd
Deletions are shown with the following attributes and color:
~~Strikeout~~, Blue RGB(0,0,255).
Deleted text is shown as full text.
Insertions are shown with the following attributes and color:
Double Underline, Redline, Red RGB(255,0,0).

The document was marked with 22 Deletions, 24 Insertions, 0 Moves.

West Virginia Department of Environmental Protection
Division of Air Quality

Earl Ray Tomblin
Governor

Randy C. Huffman
Cabinet Secretary

Permit to Update

R13-2988~~A~~B

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45 C.S.R. 13 — Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the facility listed below is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:

Monongahela Power Company
Harrison Power Station
033-00015

William F. Durham
Director

Issued: ~~May 25~~August 10, 2016

Facility Location:	Haywood, Harrison County, West Virginia
Mailing Address:	800 Cabin Hill Drive (Room A-301) Greensburg, PA 15601
Facility Description:	Power Plant
NAICS Codes:	221112
UTM Coordinates:	557.392 km Easting • 4,359.489 km Northing • Zone 17
Permit Type:	Class ~~H~~I Administrative Update
Description of Change:	~~Class II update to install a Refined Coal System for the application of sorbent chemicals to coal for NOx and possible Hg, and SO_2 reduction/control. Also added to the permit: seasonal (Oct - April; May - Sept) NOx emission rates (lb/mmBtu) for Units 1, 2 and 3 boilers based on a 30 day rolling average.~~

This update is to correct the following:

1) **Page 13, Section 4.0, Source-Specific Requirements**: For clarification, add a notation under Condition 4.1 to indicate that all conditions and references to 40 CFR Part 60, Subpart Y are not applicable to the refined coal process. These conditions and requirements are intended for the Rapid Discharge Rail Unloader (RDRU) process which has yet to be installed, as noted in the permit.

2) **Page 14, Condition 4.1.4**: Correct the total annual throughput of coal for the RDRU facility to 5,000,000 tons per year from 500,000 tons per year.

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5) **Page 19, Conditions 4.2.2 through 4.2.5:** Correct condition numbering mistake caused by there being two (2) condition 4.2.2's.

6) **Page 20, Condition 4.3.4**: Add the phrase "Rapid Discharge Rail Unloading" prior to the word "facility" to clarify that the 5,000,000 ton per year limit applies only to the amount of coal to be unloaded by the RDRU.

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Law W.Va. Code §§22-5-1 et seq. and the following Legislative Rules promulgated thereunder:

2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

2.4. Term and Renewal

2.4.1. This permit supersedes and replaces previously issued Permit R13-2988A. This permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule.

2.5. Duty to Comply

2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Applications R13-2988, R13-2988A, R13-2988B and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to; **[45CSR§§13-5.11 and 13-10.3]**

2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;

2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;

2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

4.0. Source-Specific Requirements

4.1. Limitations and Standards

Note: **All conditions under this section with citations from 40 CFR Part 60, Subpart Y, "Standards of Performance for Coal Preparation and Processing Plants" apply only the Rapid Discharge Rail Unloading System, which is yet to be installed.**

4.1.1. Emissions from activities permitted herein shall not exceed the following when handling Powder River Basin Coal:

	PM		PM_{10}		$PM_{2.5}$	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Railcar Unloading	0.66	0.45	0.31	0.22	0.05	0.04
Coal Load-in	3.27	2.25	1.55	1.07	0.24	0.17
Coal Storage Pile	0.43	0.06	0.22	0.03	0.09	0.01
Coal Load-out	9.14	6.28	2.12	1.46	0.21	0.14
Conv. Transfer Points	1.31	1.35	0.62	0.64	0.10	0.10
Total	**14.81**	**10.39**	**4.82**	**3.42**	**0.69**	**0.46**

4.1.2. Emissions from activities permitted herein shall not exceed the following when handling Illinois Basin Coal:

	PM		PM_{10}		$PM_{2.5}$	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Railcar Unloading	0.80	0.55	0.38	0.26	0.06	0.04
Coal Load-in	3.97	2.74	1.88	1.30	0.29	0.20
Coal Storage Pile	0.21	0.06	0.11	0.03	0.05	0.01
Coal Load-out	4.52	3.11	0.86	0.59	0.10	0.07
Conv. Transfer Points	1.59	1.64	0.76	0.78	0.12	0.12
Total	**11.09**	**8.1**	**3.99**	**2.96**	**0.62**	**0.44**

4.1.3. In no case shall annual emissions exceed the following:

	PM	PM_{10}	$PM_{2.5}$
	TPY	TPY	TPY
Total	**10.39**	**3.42**	**0.46**

4.1.4. The facility's annual throughput of total coal shall not exceed ~~500~~5,000,000 tons per year. Compliance with this limit shall be based on a 12 month rolling total.

4.1.5. No person shall cause, suffer, allow or permit any source of fugitive particulate matter to operate that is not equipped with a fugitive particulate matter control system. This system shall be operated and maintained in such a manner as to minimize the emission of fugitive particulate matter. **[45CSR§2-5.1.]**

4.1.6. On and after the date on which the performance test is conducted or required to be completed under §60.8, whichever date comes first, an owner or operator of any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified after April 28, 2008, must meet the requirements in paragraphs (b)(1) through (3) of this section, as applicable to the affected facility. **[40CFR§60.254(b)]**

(1) Except as provided in paragraph (b)(3) of this section, the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit 10 percent opacity or greater. **[40CFR§60.254(b)(1)]**

(2) The owner or operator must not cause to be discharged into the atmosphere from any mechanical vent on an affected facility gases which contain particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf). **[40CFR§60.254(b)(2)]**

(3) Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of paragraph (b)(1) of this section. **[40CFR§60.254(b)(3)]**

4.1.7. **Fugitive Coal Dust Emissions Control Plan for Subpart Y - Fugitive Coal Dust Emissions Control Plan.** The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions as specified in paragraphs (c)(1) through (6) of this section. **[40CFR§60.254(c)]**

(1) The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile. **[40CFR§60.254(c)(1)]**

115,200 gallons per year. Compliance with this condition shall be based on a rolling twelve month total.

4.1.13. NOx emissions from the Units 1, 2 and 3 boilers shall not exceed the following based on a rolling 30 day average. For the purposes of this permit, a rolling 30 day average shall mean the average daily (calendar day) emission rate from the last 30 operating days, excluding NOx emissions during periods that ~~urea~~ammonia injection to the selective catalytic reduction system must be discontinued due to low flue gas temperature to avoid damaging the catalyst. Low flue gas temperature conditions shall mean when the temperature of the flue gas is less than 605 °F during any operating hour and this time shall be excluded from the operating day for the purpose of averaging. An operating day shall mean a calendar day in which ~~either~~any boiler is operated for at least one hour.

a. The NOx emission rate shall not exceed 0.25 lb/mmbtu on a 30 day rolling average; and

b. Beginning the 30 day period that commences on May 1 and ends on May 30 and for each succeeding 30 day period through September 30, the NOx emission rate shall not exceed [(1)]0.20 lb/mmbtu.

[(1)] But for the following one-time exception for Unit 2 boiler only, during the five (5), consecutive 30 day periods of May through September 2016, preceding and during a catalyst replacement: The NOx emission rate shall not exceed 0.28 lb/mmbtu on a 30 day rolling average.

c. The permittee shall monitor the catalyst flue gas temperature and record it as rolling block hourly averages. The recorded information shall include the date, hour, catalyst flue gas temperature, ~~urea~~ammonia flow and an indicator that shows if the ~~urea~~ammonia flow has been discontinued due to low flue gas temperature.

d. The permittee shall maintain on-site the records required in 4.1.13.c. for a period of five (5) years. Such records may be in electronic form but must be available for inspection by designated agents of the DAQ and exportable to standard database/spreadsheet formats.

4.1.14. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR§13-5.11.]

4.2. Testing Requirements

4.2.1. The permittee shall comply with all applicable standards of 40 CFR 60 Subpart Y including but not limited to the following:

Performance Tests and Other Compliance Requirements for Subpart Y - Performance Tests.

possible.
[40CFR§60.255(f)(1)(ii)]

(iii) Conduct a performance test using Method 9 of Appendix A-4 of this part at least once every 5 calender years for each affected facility.
[40CFR§60.255(f)(1)(iii)]

(2) Prepare a written site-specific monitoring plan for a digital opacity compliance system for approval by the Administration or delegated authority. The plan shall require observations of at least one digital image every 15 seconds for 10-minute periods (during normal operation) every operating day. An approvable monitoring plan must include a demonstration that the occurrences of visible emissions are not in excess of 5 percent of the observation period. For reference purposes in preparing the monitoring plan, *see* OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods. The monitoring plan approved by the Administrator delegated authority shall be implemented by the owner or operator.
[40CFR§60.255(f)(2)]

4.2.~~2~~3. The permittee shall perform daily monitoring and recordkeeping of the total daily sorbent usage rate, and records of startups, shut-downs, malfunctions, and maintenance of the Refined Coal System. Daily records maintained in accordance with this paragraph shall be available upon request at the facility.

4.2.~~3~~4. In order to determine compliance with condition 4.1.9, the permittee shall monitor and record the amount of S-Sorb delivered to the facility on a daily basis.

4.2.~~4~~5. In order to determine compliance with condition 4.1.12, the permittee shall monitor and record the amount of MerSorb delivered to the facility on a daily basis.

4.2.~~5~~6. In order to determine compliance with condition 4.1.13, the permittee shall install, certify, operate and maintain continuous emissions monitoring systems (CEMS). Said CEMs shall be designed, installed, operated and maintained in accordance with 40 CFR 75 as applicable.

4.3. Monitoring and Recordkeeping Requirements

4.3.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

4.3.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

4.3.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

4.3.4. In order to determine compliance with the throughput requirement of section 4.1.4 of this permit the permittee shall monitor and record the amount of total coal processed through the Rapid Discharge Rail Unloading facility on a monthly basis.

4.3.5 In order to determine compliance with the requirements of sections 4.2.1and 4.2.2 of this permit, records of the Method 22 and/or Method 9 testing shall be retained on site by the permittee for at least five (5) years. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.

4.4. Reporting Requirements

4.4.1. Any violation(s) of the allowable visible emission requirement for any emission source discovered during observation using 40CFR Part 60, Appendix A, Method 9 must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any