
This permit will supercede and replace Permit R14-0027D issued on July 1, 2014.

Facility Location: 15696 Energy Road
Proctor, WV 26055
Mailing Address: P.O. Box 191
New Martinsville, WV 26155-0191
Facility Description: Chemical Manufacturing
SIC/NAICS Codes: (2812, 2865)/(325181, 325110)
UTM Coordinates: 512.7 km Easting • 4,399.6 km Northing • Zone 17
Latitude/Longitude: 39.748056°/-80.848889°
Permit Type: Modification
Description of Change: Installation of a 99.9 mmBtu/hr Babcock & Wilcox Model RB-747 natural gas-fired boiler.

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.

The source is subject to 45CSR30. Changes authorized by this permit must also be incorporated into the facility's Title V operating permit. Commencement of the operations authorized by this permit shall be determined by the appropriate timing limitations associated with Title V permit revisions per 45CSR30.

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1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
<i>R011</i>	<i>S076</i>	<i>No.3 Boiler</i>	<i>Shutdown 7/8/16</i>	<i>243 MMBtu/hr</i>	<i>FF (FF001)</i>
<i>R015</i>	<i>S076</i>	<i>No. 4 Boiler</i>	<i>Shutdown 8/6/16</i>	<i>496 MMBtu/hr</i>	<i>ESP (ES002)</i>
R072	S482	No.5 Boiler (fired by natural-gas)	1966/2016	1,125 MMBtu/hr	None
R097	S076	No. 6 Boiler with Low-NO _x Burner (fired by 100% hydrogen or natural gas)	1993/2015	182 MMBTU	None
R200	S200	Babcock & Wilcox Model RB-747 Rental Boiler (fired by natural gas)	2017	99.9 MMBTU	None

FF – Fabric Filter Baghouse

ESP – Electrostatic Precipitator

2.0. General Conditions

2.1. Definitions

- 2.1.1. All references to the “West Virginia Air Pollution Control Act” or the “Air Pollution Control Act” mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The “Clean Air Act” means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. “Secretary” means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary’s designated representative for the purposes of this permit.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to “rolling yearly total” shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments	NO_x	Nitrogen Oxides
CBI	Confidential Business Information	NSPS	New Source Performance Standards
CEM	Continuous Emission Monitor	PM	Particulate Matter
CES	Certified Emission Statement	PM_{2.5}	Particulate Matter less than 2.5 μm in diameter
C.F.R. or CFR	Code of Federal Regulations	PM₁₀	Particulate Matter less than 10μm in diameter
CO	Carbon Monoxide	Ppb	Pounds per Batch
C.S.R. or CSR	Codes of State Rules	Pph	Pounds per Hour
DAQ	Division of Air Quality	Ppm	Parts per Million
DEP	Department of Environmental Protection	Ppmv or ppmv	Parts per Million by Volume
dscm	Dry Standard Cubic Meter	PSD	Prevention of Significant Deterioration
FOIA	Freedom of Information Act	Psi	Pounds per Square Inch
HAP	Hazardous Air Pollutant	SIC	Standard Industrial Classification
HON	Hazardous Organic NESHAP	SIP	State Implementation Plan
HP	Horsepower	SO₂	Sulfur Dioxide
lbs/hr	Pounds per Hour	TAP	Toxic Air Pollutant
LDAR	Leak Detection and Repair	TPY	Tons per Year
M	Thousand	TRS	Total Reduced Sulfur
MACT	Maximum Achievable Control Technology	TSP	Total Suspended Particulate
MDHI	Maximum Design Heat Input	USEPA	United States Environmental Protection Agency
MM	Million	UTM	Universal Transverse Mercator
MMBtu/hr or mmbtu/hr	Million British Thermal Units per Hour	VEE	Visual Emissions Evaluation
MMCF/hr or mmcf/hr	Million Cubic Feet per Hour	VOC	Volatile Organic Compounds
NA	Not Applicable	VOL	Volatile Organic Liquids
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Act 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;*
- 2.3.2. 45CSR14 – *Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration;*

2.4. Term and Renewal

- 2.4.1. This permit supersedes and replaces previously issued Permit R14-0027D. 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 other 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 Application R13-1637, R13-1637A, R14-0027, R14-0027A, R14-0027B, R14-0027C, R14-0027D, R14-0027E, 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 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.

2.7. Duty to Supplement and Correct Information

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

2.8. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-4.]

2.9. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-5.4.]

2.10 Major Permit Modification

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.

[45CSR§13-5.1]

2.11. Inspection and Entry

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

2.12. Emergency

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by

improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.
- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
 - d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5 The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

2.14. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.15. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.

2.16. Severability

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.17. Transferability

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1.]

2.18. Notification Requirements

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.19. Credible Evidence

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association, or public agency is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management, and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40CFR§61.145(b) and 45CSR§34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1] *[State Enforceable Only]*
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2.]

3.2. Monitoring Requirements

[Reserved]

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary

exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 1. The permit or rule evaluated, with the citation number and language;
 2. The result of the test for each permit or rule condition; and,
 3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

3.4. Recordkeeping Requirements

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded

in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§4. State Enforceable Only.]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es), or submitted in electronic format by email as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street
Charleston, WV 25304-2345

DAQ Compliance and Enforcement¹:
DEPAirQualityReports@wv.gov

If to the US EPA:

Associate Director
Office of Air Enforcement and Compliance Assistance
(3AP20)
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

¹ For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, notice of Compliance Status Reports, Initial Notifications, etc.

3.5.4. Operating Fee

- 3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be

maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

4.0. Source-Specific Requirements

4.1. Limitations and Standards

4.1.1. *[Reserved]*

4.1.2. *[Reserved]*

4.1.3. The following conditions and requirements are specific to No. 5 Boiler (ID #R072):

a. *[Reserved]*

b. After the boiler has been converted to natural gas firing, the emission limits in this item are in effect upon the initial restarting from being converted to fire on natural gas. The boiler shall not exceed the following limitations:

i. CO emissions emitted to the atmosphere from the boiler shall not exceed 0.082 pounds per MMBtu. A new 30-day rolling average emission rate shall be determined on a daily basis and shall be calculated as the average of all the hourly CO emission data for the preceding 30 steam generating unit operating days.

ii. NO_x emissions emitted to the atmosphere from the boiler shall not exceed 0.16 pounds per MMBtu. A new 30-day rolling average emission rate shall be determined on a daily basis and shall be calculated as the average of all the hourly NO_x emission data for the preceding 30 steam generating unit operating days.

iii. The boiler shall only be fired with “pipeline quality natural gas” as defined in 45 CSR§10A-2.7. Compliance with this condition satisfies compliance with the limitations of 45CSR§2-3.1., 45CSR§2-4.1.b., 45CSR§10-3.1.e.; and the requirement of 45 CSR §2-8.1.a., 45 CSR §2-8.2., and Section 8 of 45 CSR §10.
[45 CSR §2-8.4.b., 45 CSR §2A-3.1.a., 45 CSR §10-10.3., and 45CSR §10A-3.1b.]

iv. The 24- hour average heat input of the boiler shall be no greater than 999 MMBtu/hr. Compliance with this limit for the boiler shall be satisfied by limiting the annual total heat input into the unit to 8,751,240 MMBtu on 12 month rolling total basis.

4.1.4. The following conditions and requirements are specific to No. 6 Boiler (ID #R097):

a. CO emissions emitted to the atmosphere from the boiler shall not exceed 0.085 pounds per MMBtu. A new 30-day rolling average emission rate shall be determined on a daily basis and shall be calculated as the average of all the hourly CO emission data for the preceding 30 steam generating unit operating days.

b. NO_x emissions emitted to the atmosphere from the boiler shall not exceed 0.04 pounds per MMBtu. A new 30-day rolling average emission rate shall be determined on a daily basis and shall be calculated as the average of all the hourly NO_x emission data for the preceding 30 steam generating unit operating days.
[40 CFR §60.44b(a), (h), and (i)]

c. The boiler shall only be fired with hydrogen gas, pipeline quality natural gas or any combination of these two fuels. Compliance with this condition satisfies compliance with the limitations of 45CSR§2-3.1., 45CSR§2-4.1.b., 45CSR§10-3.1.e.; and the requirement of 45 CSR §2-8.1.a., 45 CSR §2-8.2., and Section 8 of 45 CSR §10.
[45 CSR §2-8.4.b., 45 CSR §2A-3.1.a., 45 CSR §10-10.3., and 45CSR §10A-3.1b.]

- d. The hydrogen gas to be fired in the boiler shall not have a concentration of greater than 40 micrograms of mercury per cubic meters of gas after January 31, 2016. The hydrogen gas meeting this standard is classified as an “other gas 1 fuel” under Subpart DDDDDD of Part 63.
[40 CFR §63.7575]
 - e. The 24-hour average heat input of boiler shall be no greater than 182 MMBtu/hr. Compliance with this limit for the boiler shall be satisfied by limiting the annual total heat input into the unit by 1,594,320 MMBtu on 12 month rolling total basis.
 - f. Natural gas, with an average rating of 906 BTUs per cubic foot, shall be available as a secondary fuel to the boiler for start-up and stabilization procedures during routine boiler operation. Natural gas consumption shall not exceed a maximum of 15,080 cubic feet per hour and 132.1×10^6 cubic feet per year.
[40 CFR §60.44(e)]
 - g. Prior to the conversion, item f of this condition shall be in effect. Upon initial re-start of the unit from conversion modification, item f of this condition is no longer applicable or enforceable.
- 4.1.5. Visible emissions from each of these emission points S076 (No. 6 Boilers Stack) and S482 (No. 5 Boiler) shall not be greater than ten (10) percent opacity based on a six minute block average.
[45 CSR §2-3.1]
- 4.1.6. Nos. 5 and 6 Boilers shall be equipped, maintained, operated with an oxygen trim system that maintains an optimum air to fuel ratio for each unit. Such system shall be installed up on initial start-up of the unit from the conversion to natural gas retrofit.
[40 CFR §63.7575]
- 4.1.7. Once the natural gas conversion for Nos. 5 and 6 Boilers has been completed individually, the initial tune-up and subsequent tune-ups for the units shall be conducted in accordance with the following timing and tune-up requirements:
- a. If the initial start-up after the conversion occurs before January 31, 2016, then the initial tune-up for the unit must be completed by no later than January 31, 2016.
[40 CFR §63.7510(e) & §63.7495(b)]
 - b. If the initial start-up after the conversion occurs after January 31, 2016, then the initial tune-up for the unit shall be completed by no later than 30 calendar days after the initial start-up from the natural gas conversion of the unit.
[40 CFR §63.7510(j)]
 - c. Subsequent tune-ups shall be completed no later than 61 months after previous tune-up.
[40 CFR §63.7515(d) § 63.7540(a)(12)]
 - d. Each tune-up shall consist of the following:
 - i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (permittee may delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

- ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
- iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);
- iv. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, which includes the manufacturer's NO_x concentration specification taken in consideration; and
- v. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

[40 CFR §63.7500(a)(1), §63.7505(a), §63.7515(d), §§63.7540(a)(10) & (12), and Table 3 to Subpart DDDDD of Part 63—Work Practice Standards]

4.1.8. The permittee shall conduct a "one-time energy assessment" of the facility, which must include Nos. 5 and 6 Boilers, as specified in Table 3 of 40 CFR 63 Subpart DDDDD. Pursuant to 40 CFR §63.7510(e), the energy assessment shall be completed no later than January 31, 2016.

[40 CFR §63.7500(a)(1), §63.7505(a), and Table 3 of 40 CFR 63 Subpart DDDDD]

4.1.9. As requested by the permittee on March 19, 2014, the Director hereby grants the permittee an extension for compliance with the HAP emission limitations of Subpart DDDDD of Part 63 of Chapter 40 for Nos. 3, 4, and 5 Boilers in accordance with the following limitations.

No. 5 Boiler may be operated as currently configured burning coal until March 1, 2016.

No. 3. and No.4 Boilers may be operated as currently configured burning coal until December 1, 2016 or 180 days after the restart of No. 5 Boiler as a "Gas 1 Unit", whichever is sooner. Afterward, No. 3 and No. 4 Boilers shall be permanently shut down.

In effort to minimize HAP emissions during the extension, the permittee shall at the minimum implement the following work practices to these units on or before January 31, 2016:

- a. Conduct a tune-up on each unit in accordance with the tune-up requirement of Condition 4.1.7., which include associated records.
- b. The units shall be limited to using natural gas fuel during start-up operations.
- c. Once the unit starts firing pulverized coal, the permittee must begin to operate associated particulate matter control for the unit as expeditiously as possible.
- d. The permittee must operate the associated particulate matter control at all times when the unit is operating.
- e. The permittee shall operate and maintain the oxygen trim system on each unit.
- f. During shut down of the unit, the permittee must continue to operate the associated particulate matter control device.
- g. The permittee must operate the units in accordance with the other applicable limits in this permit.

The permittee shall maintain records of implementing these work practices in accordance with Condition 3.4.1. and following the reporting requirements of Condition 4.5.5.
[40 CFR §63.6(i) and 45 CSR §14-2.46.h.]

4.1.10. The Rental Boiler, identified as R200, shall meet the following requirements:

a. The Rental Boiler shall be a Babcock & Wilcox Model RB-747, shall not exceed an aggregate MDHI of 99.9 MMBtu/hr, shall only be fired by pipeline-quality natural gas (PNG), shall utilize Low-NO_x Burner technology, and shall not exceed those emission limits given in the following table:

Table 4.1.10(a): Rental Boiler Emission Limits

Pollutant	PPH	TPY
CO	7.49	32.82
NO_x	3.65	15.97
PM_{2.5}/PM₁₀/PM⁽¹⁾	0.50	2.19
VOCs	0.40	1.75

⁽¹⁾ Includes condensables.

- b. As the annual emissions are based on 8,760 hours of operation, there is no annual limit on hours of operation or PNG combusted on an annual basis for the Rental Boiler;
- c. Visible emissions from boiler R200 shall not be greater than ten (10) percent opacity based on a six minute block average.
[45 CSR §2-3.1]
- d. The permittee shall not cause, suffer, allow or permit the discharge of sulfur dioxide into the open air from boiler R200 measured in terms of pounds per hour, in excess of the product of 3.2 and the total design heat of the boilers in million BTU's per hour.
[45CSR§10-3.1]
- e. The permittee shall meet all applicable requirements as given under 40 CFR 60, Subpart Dc for boiler R200.
- f. The permittee shall meet all applicable requirements for a major source of HAPs as given under 40 CFR 63, Subpart DDDDD for boiler R200.

4.1.11. **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. Monitoring Requirements

4.2.1. *[Reserved]*

- 4.2.2. For the purpose of satisfying the monitoring plan requirements of 45 CSR 2, the permittee shall conduct the following monitoring with respect to each unit and associated PM control device:
- a. Conduct either Method 22 or Method 9 as outlined in Appendix A of 40 CFR Part 60, observation once per month for the purpose of verifying or demonstration compliance with the standard in Condition 4.1.4. for the respective emission point. If visible emissions are detected using a Method 22, a Method 9 must be conduct to determine compliance with the actual standard within seven operating days of the Method 22 observation.
 - b. The permittee shall monitor the number of fabric filter compartments online for the fabric filter baghouse (FF0001) and the number of modules on the precipitator T/R Cabinets that are in service for each ESP (ES001 & ES002). The permittee shall make record of the date and time of the changes to the compartments or modules in service and the respective change. For proper operation of the fabric filter baghouse FF001, 5 of the 8 compartment must be in service at all times. For proper operation of the ESP ES001, 6 of the 16 modules must be in service at all times. For proper operation of the ESP ES002, 4 of the 11 modules must be in service at all times.
 - c. For fabric filter bag house FF001 only, the service “status” of each compartment will be monitored on a continuous display panel and the differential pressure across the compartment (recorded every two hours) will be used to determine the status.
 - d. For ESPs ES001 and ES002 only, the primary AC voltage on the T/R Cabinets is displayed in the operations control room, and this value is recorded once per shift. A voltage reading greater than 0 indicates the modules in that T/R Cabinet are in service.
 - e. In the event of an excursion and if practicable, the permittee shall isolated and repair the fabric filter compartment or ESP module. In the event that the number of compartments or modules in service are below the minimum number as list in item b. for the respective control device, the permittee shall conduct a Method 9 observation to determine compliance with the standard in Condition 4.1.5. If the initial observation determines an excursion of the standard, the permittee shall continue to conduct Method 9 observations for each hour during the excursion until four (4) successive six minute observations demonstrated compliance with the standard.

All records of the monitoring and actions taken shall be maintained in accordance with Condition 3.4.1. Once the natural gas conversion of No.5 Boiler is completed and No. 3. and No.4 Boilers are shut-down , the monitoring requirement of this condition is no longer required per 45 CSR §2A-3.1.b.

[45 CSR §§2-8.2 and 8.3]

- 4.2.3. For No. 5 Boiler post conversion to natural gas, the permittee shall install, operate, certify and maintain a continuous emission monitoring system (CEMS) for measuring NO_x, CO, and diluent gas (CO₂ or O₂) monitoring system from the exhaust of No. 5 Boiler in accordance with the applicable Performance Specifications under Appendix B to Part 60 of Chapter 40 for CO and Part 75 of Chapter 40 for NO_x, and diluent gas. Such monitor system shall include an automated data acquisition and handling system (DAHS). All required certification tests of the monitoring system must be completed no later than 90 unit operating days or 180 calendar days (whichever is sooner) after initial start-up from the natural gas conversion project.

The permittee may elect to use a predictive emission monitoring system (PEMS) as an alternative monitoring system in lieu of CEMS. Using PEMS, the permittee must have this alternative monitoring system certified under the applicable procedures of Subpart E of 40 CFR 75 and approved by the USEPA Administrator.

The permittee must calculate and record an hourly average or heat input average (respective to the terms of the emission limit for the corresponding pollutant) emission rate on a daily basis for each pollutant identified in this condition for each boiler. CEMS unit conforming to the specifications of 40 CFR Part 75 shall use unbiased, un-substituted data to demonstrate compliance with the limits as specified in this permit.

For purposes of calculating data averages, the permittee cannot use data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, required quality assurance or control activities. The permittee must use all the data collected during all other periods in assessing compliance with the emission limit permitted in Condition 4.1.3. Any periods for which the monitoring system is out of control and data are not available for required calculations constitute a deviation from the monitoring requirements. Records of all data collected, calibrations, calibration checks, relative accuracy tests, maintenance performed, and malfunctions of the CEMS/PEMS shall be maintained in accordance with Condition 3.4.1. of this permit.

[45 CSR §40-71. and 40 CFR §75.20. (NO_x Monitoring)]

- 4.2.4. For No. 6 Boiler post conversion to natural gas, the permittee shall install, operate, certify and maintain a continuous emission monitoring system (CEMS) for measuring NO_x, CO, and either CO₂ or oxygen analyzer according to the applicable procedures under Appendix B, and Appendix F to Part 60 of Chapter 40 on a continuous basis. Such monitor system shall include an automated data acquisition and handling system (DAHS).

The span value for the NO_x CEMs shall be 500 ppm (40 CFR §60.48b(e)(2)(i)) if applicable.

The permittee must conduct and pass a performance evaluation of the CEMS or PEMS according to the procedures under 40 CFR §60.13. within 180 days after restarting of the boiler.

For NO_x and CO₂ or O₂ direct measurement only; when NO_x emission data are not obtained because of CEMS breakdown, repairs, calibration checks, and zero and span adjustment, emission data will be obtained by using standby monitoring systems, Method 7 or 7A of Appendix A of Part 60, or other approved reference methods to provided emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of the 30 successive steam generating unit operating days. **[40 CFR §60.48b(f)]**

The permittee may elect to use a predictive emission monitoring system (PEMS) as an alternative monitoring system in lieu of CEMS. Such PEMS must meet the Performance Specification (PS) 16 of Appendix B-Performance Specifications and Appendix F-Quality Assurance Procedures to Part 60, which consist of passing an initial and follow-up relative accuracy test, and conducting periodic quality assurance (QA) assessments. Using PEMS, the permittee must submit an application request and obtain approval by the USEPA. Administrator in accordance with 40 CFR §60.13(i) and the most current version of Emissions Measurement Center Guideline Document EMC GD-022 before using the NO_x PEMS for demonstrating compliance with 40 CFR §60.44b.

For purposes of calculating data averages, the permittee cannot use data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, required quality assurance or control activities. The permittee must use all the data collected during all other periods in assessing compliance with the emission limit permitted in Condition 4.1.4. Any periods for which the monitoring system is out of control and data are not available for required calculations constitute a deviation from the monitoring requirements. Records of all data collected, calibrations, calibration checks, relative accuracy tests, maintenance performed, and malfunctions of the CEMS/PEMS shall be maintained in accordance with Condition 3.4.1. of this permit.

[40 CFR §§60.48b(b) though (f) and 45 CSR 13-5.11]

4.3. Testing Requirements

- 4.3.1. The permittee shall conduct testing for demonstrating compliance with the PM limits of Conditions 4.1.1.a.ii., 4.1.2.a.ii., and 4.1.3.a.ii. in accordance with 45 CSR §2A-5.2.a. and Condition 3.3.1. In conjunction with this PM demonstration, the permittee shall demonstrate compliance with the visible emission standards of Condition 4.1.4 using Method 9 with respect to the unit being tested. The determination of the timing shall be based on the weight allowable for each unit established by 45 CSR §2-4.1.b. in accordance with frequency prescribed in §2A-5.2.a. Records of such testing shall be maintained in accordance with Condition 3.4.1. of this permit.

Once the natural gas conversion of No.5 Boiler is complete, the periodical testing requirement of this condition is no longer required per 45 CSR §2A-3.1.b.

[45 CSR §2-8.1., 45CSR §§2A-5.1.a and 5.2.a.]

- 4.3.2. The permittee shall determine if the hydrogen gas produced at the facility meets the specification as stated in Condition 4.1.4.e. by using the approved site-specific fuel analysis plan for sampling and analyzing the hydrogen gas that is to be used as fuel in No. 6 Boiler no later than July 31, 2016.

[40 CFR §63.7510(e)]

4.4. Recordkeeping Requirements

- 4.4.1. **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.

- 4.4.2. **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.

- 4.4.3. **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.

- 4.4.4. The permittee shall keep records of fuel consumed by each boiler on a daily basis, which includes natural gas usage. For the purpose of demonstrating that the natural gas has insignificant amount of sulfur, the permittee shall keep fuel receipts (such as a, valid purchase contract, tariff sheet, or transportation contact) from the natural gas supplier.

Once the natural gas conversion for No. 6 Boiler has been completed, the permittee shall calculate the annual capacity factor for natural gas. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. Such records shall be maintained in accordance with Condition 3.4.1.

[45CSR §2-7.1.a.6., and 45 CSR §10-8.3.c.][No. 6 Boiler only – 40 CFR §§60.49b(d)(2), (r)(1)]

- 4.4.5. The permittee shall maintain records of the monitoring as required in Conditions 4.2.3. and 4.2.4. for each steam generating unit operating day, which at least the following information:
 - a. Calendar date;
 - b. The average hourly NO_x and CO emission rate in terms of lb per MMBtu heat input;
 - c. The 30-day average NO_x and CO emission rates calculated at the end of each steam generating unit operating day for the preceding 30 steam generating unit operating days;
 - d. Identification of steam generating unit operating days when the calculated 30 day average NO_x or CO emission rates are in excess of the respective limits in Conditions 4.1.3. and 4.1.4. with reasons for such excess emissions and description of corrective actions taken;
 - e. Identification of the steam generating unit operating days for which pollutant data have not been obtained, include reasons for not obtaining sufficient data and a description of corrective actions taken;
 - f. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;
 - g. Identification of the times when the pollutant concentration exceeded full span of the CEMS;
 - h. Description of any modifications to the CEMS or PEMS that could affect the ability of the CEMS or PEMS to comply with respective PS; and
 - i. Results of daily CEMS drift tests and quarterly accuracy assessments as required Appendix F, Procedure 1 or Part 75.

4.5. Reporting Requirements

- 4.5.1. The permittee shall submit to the Director within 45 days of completion of performance evaluation for the CEMS or PEMS for No. 5 Boiler two copies of the performance evaluation report of CEMS or PEMS for each unit and a copy of the Re-Certification Application.
[40 CSR §40-74.3. and 40 CFR §75.63.]
- 4.5.2. The permittee shall submit to the Director within 60 days of completion of performance evaluation for the CEMS or PEMS for No. 6 Boiler two copies of the performance evaluation report of CEMS or PEMS.
[40 CFR §60.13(c)(1)]
- 4.5.3. Once the CEMS or PEMS for No. 5 and No. 6 Boilers has been certified after being converted to natural gas; *Semi-Annual CO and NO_x Excess Emission and Monitoring System Performance Report*: To be included with the facility's Annual and Semi-Annual Title V Compliance Report, the permittee shall submit a report to the Director summarizing CO and NO_x emissions including periods of startups, shutdowns, malfunctions, and CEMS or PEMS system monitor availability for the reporting period. The reporting period is January 1st to June 30th and July 1st to December 31st. Such report shall contain the information collected during the respective reporting period as required in Condition 4.4.5. Any emissions data that indicates that the limits as stated in Section 4.1. were exceeded during the corresponding reporting period must be noted in this summary report. At the minimum, the date and time, length of the exceedances(s), magnitude, percentage of excess emissions, the limit that was exceeded, the cause of the exceedances, and the corrective action taken shall be included in the summary report. Submittal of 40 CFR 75 data (NO_x) in electronic data reporting (EDR or XML) format to the Administrator shall be deemed to satisfy the reporting requirements of this condition for NO_x emissions from No. 5 Boiler, expect that excess NO_x emission from No. 5 Boiler shall be included in this report.
[40 CFR §60.7(c); 40 CFR §§60.49b(h) and (2)(ii); and 45CSR§13-3]
- 4.5.4. The permittee shall develop and submit a site-specific fuel analysis plan for the hydrogen fuel for determining if it is meets the specification in Condition 4.1.4.e. Such plan must follow or conform to the procedures and requirements in 40 CFR §§63.7521(g)(1), (2), and item 3 of Table 6 to Subpart DDDDD of Part 63 to the Director by no later than July 31, 2015.
[40 CFR §63.7521(g)]
- 4.5.5. The permittee shall submit a "Notification of Compliance Status" to the Director before the close of business on the sixtieth (60th) day after completion of the initial compliance demonstration as required in 40 CFR §63.7530(e) and (g). Such "Notification of Compliance Status" shall be in accordance with 40 CFR §63.9(h)(2)(ii) and contain the information specified in 40 CFR §§63.7545(e)(1), (2), (6), (7) and (8), which included a statement the one time energy assessment was completed as required in Condition 4.1.7., the initial tune-up for each unit was completed and the initial fuel analysis was conducted according to §63.7525 for the hydrogen gas and meet the specifications as an "other gas (1) fuel" (Condition 4.1.4.e.).
[40CFR§63.7545(e), §63.7530(e) and (g)]
- 4.5.6. The permittee shall submit "5 year Compliance Report" to the Director for No. 5 and No. 6 Boilers with the first report being submitted by no later than January 31, 2016, or the first January 31 following the initial tune-up of the unit, and subsequent reports are due every 5 years from thereafter. Such reports shall contain the information specified in 40 CFR §§63.7550(c)(5)(i) through (iv) and (xiv) which are:
- a. Permittee and facility name, and address;

- b. Process unit information, emission limitations, and operating limitations;
 - c. Date of report and beginning and ending dates of the reporting period;
 - d. The total operating time during the reporting period of each affected unit;
 - e. Include the date of the most recent tune-up for the boiler; and
 - f. Include the date of the most recent burner inspection if it was not done within 5 year tune-up and was delayed until the next scheduled or unscheduled unit shutdown.
- [40CFR §§63.7550(b), (b)(1), (c)(1), & (c)(5)(i) though (iv) and (xiv)]**

CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature¹ _____
(please use blue ink) Responsible Official or Authorized Representative Date

Name & Title _____
(please print or type) Name Title

Telephone No. _____ Fax No. _____

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- ¹ This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:
- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
 - (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
 - (ii) the delegation of authority to such representative is approved in advance by the Director;
 - b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
 - c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of USEPA); or
 - d. The designated representative delegated with such authority and approved in advance by the Director.