West Virginia Department of Environmental Protection

Joe Manchin, III
Governor

Division of Air Quality

Randy C. Huffman
Cabinet Secretary

DRAFT Permit to Construct

DRAFT R13- 2838

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 above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:

E.I. duPont de Nemours and Company
Washington Works
107-00001

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John A. Benedict
Director

Issued: DRAFT • Effective: DRAFT

Facility Location:	Washington, Wood County, West Virginia
Mailing Address:	P.O. Box 1217; Washington, WV 26181-1217
Facility Description:	Combustion Units subject to 112(j) equivalent emission limitation by permit via case-by-case MACT.
SIC Codes:	2821
UTM Coordinates:	[442.3] km Easting • [4,346.8] km Northing • Zone 17
Permit Type:	Construction
Description of Change:	112(j) Case-by-Case MACT equivalent emission limitation by permit to meet the requirements of 40 CFR 63 Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters) under the conditions of an implemented 112(j) program.

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. The permittee has the duty to update the facility's Title V (45CSR30) permit application to reflect the changes permitted herein.

Table of Contents

1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
P02	475	Spreader-Stoker Boiler #2 (Mfg. Combustion Engineering)	1947	64.2 MMBTU/hr	P102C
P03	476	Spreader-Stoker Boiler #3 (Mfg. Combustion Engineering)	1957	94 MMBTU/hr	P103C
P04	476	Spreader-Stoker Boiler #4 (Mfg. Riley-Stoker)	1959	125 MMBTU/hr	P104C
P05	477	Spreader-Stoker Boiler #5 (Mfg. Riley Stoker)	1963	181 MMBTU/hr	P105C
P06	477	Spreader-Stoker Boiler #6 (Mfg. Riley-Stoker)	1965	241 MMBTU/hr	P106C
P130E	493	North Sorbent Silo	2007	4546 ft3	P130C
P131E	493	South Sorbent Silo	2007	4546 ft3	P131C
P31	479	Gas Fired Boiler #8 (Mfg. Babcock & Wilcox; Model #FM-120-978)	1989	181 MMBTU/hr	P31C
152Z-V3	152Z-33E	Vaporizer	1962	14 MMBTU/hr	None
152Z-V4	152Z-44E	Vaporizer	1968	14 MMBTU/hr	None
254-01S	254-01	Vaporizer	1968	14 MMBTU/hr	None
254-02S	254-02	Vaporizer	1968	14 MMBTU/hr	None
254-05S	254-05	Vaporizer	1968	16.5 MMBTU/hr	None
254-06S	254-06	Vaporizer	1977	18 MMBTU/hr	None
TICA	TICAE	Furnace	1994	BC*	None
TICB	TICBE	Furnace	1994	BC*	None
TICC	TICCE	Furnace	1994	BC*	None
TICD	TICDE	Furnace	1994	BC*	None
DOMS	DOME	Comparable Fuels Boiler	2000	BC*	None

Control Devices

Control Device ID	Control Device Description	Minimum control efficiency
P102C	Single Stage Mechanical Dust Collector and Bag House Filter Unit. Collector Mfg. Prat Daniels; Model 6IH-15x11-152 and Bag House Mfg. Standard Havens; Model 35-5C	Collector – 85% Bag House – 98%

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
P103C	Single Stage Mechanical Dust Collector and Bag House Filter Unit. Collector Mfg. Prat Daniels; Model 6UP-10-200 and Bag House Mfg. Standard Havens; Model 35-3C			Collector – 93% Bag House – 99%	
P104C	Single Stage Mechanical Dust Collector and Bag House Filter Unit. Collector Mfg. Aerotech (Prat Daniels); Model 6UP-10-236 and Bag House Mfg. Bundy Environmental Technology; Model 4x255-13			Collector – 93% Bag House – 99%	
P105C	Single Stage Mechanical Dust Collector and Bag House Filter Unit. Collector Mfg. Airotech; Model 6MPCD and Bag House Mfg. Bundy Environmental Technology; Model 6 x 255-13			Collector – 96% Bag House – 99%	
P106C	Single Stage Mechanical Dust Collector and Bag House Filter Unit. Collector Mfg. Airotech; Model 6MPCD and Bag House Mfg. Bundy Environmental Technology; Model 8 x 255-13.			Collector – 96% Bag House – 99%	
P130C	Dust Collector (Mfg. Noltec; Model 60-NT-25)			99.9%	
P131C	Dust Collector (Mfg. Noltec; Model 60-NT-25)			99.9%	
P31C	Low NOx generation burners, Lean Burn Controls, Flue Gas Re-circulation				

BC Claimed Business Confidential*

Note 1: Only those emission units/sources as identified in Section 1.0 of this permit, with the exception of any *de minimis* sources as identified under Table 45-13B of 45CSR13, are authorized at the permitted facility.

Note 2: In accordance with the information filed in Permit Application R13-2838, the equipment identified under Section 1.0 of this permit shall be installed, maintained, and operated so as to minimize any fugitive escape of pollutants and the equipment/processes shall use the specified control devices.

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.

2.2. 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		
CO	Carbon Monoxide	**PM_{10}**	Particulate Matter less than 10µm in diameter
C.S.R. *or* CSR	Codes of State Rules		
DAQ	Division of Air Quality	**Ppb**	Pounds per Batch
DEP	Department of Environmental Protection	**Pph**	Pounds per Hour
		Ppm	Parts per Million
dscm	Dry Standard Cubic Meter	**Ppm_V or ppmv**	Parts per Million by Volume
FOIA	Freedom of Information Act		
HAP	Hazardous Air Pollutant	**PSD**	Prevention of Significant Deterioration
HON	Hazardous Organic NESHAP		
HP	Horsepower	**Psi**	Pounds per Square Inch
lbs/hr	Pounds per Hour	**SIC**	Standard Industrial Classification
LDAR	Leak Detection and Repair		
M	Thousand	**SIP**	State Implementation Plan
MACT	Maximum Achievable Control Technology	**SO_2**	Sulfur Dioxide
		TAP	Toxic Air Pollutant
MDHI	Maximum Design Heat Input	**TPY**	Tons per Year
MM	Million	**TRS**	Total Reduced Sulfur
MMBtu/hr *or* mmbtu/hr	Million British Thermal Units per Hour	**TSP**	Total Suspended Particulate
		USEPA	United States Environmental Protection Agency
MMCF/hr *or* mmcf/hr	Million Cubic Feet per Hour		
		UTM	Universal Transverse Mercator
NA	Not Applicable	**VEE**	Visual Emissions Evaluation
NAAQS	National Ambient Air Quality Standards	**VOC**	Volatile Organic Compounds
		VOL	Volatile Organic Liquids
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		

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 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 R13-2838, 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;

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.

[WV Code § 22-5-4(a)(15)]

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) 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

If to the US EPA:
Associate Director
Office of Enforcement and Permits Review
(3AP12)
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

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 [Natural Gas-Fired Boilers and Process Heaters P31, 152Z-V3, 152Z-V4, 254-01S, 254-02S, 254-05S, 254-06S, TICA, TICB, TICC, TICD, and Comparable Fuels Boiler DOMS]

4.1. Limitations and Standards

4.1.1. For the natural gas-fired Boiler No. 8 [P31] located in the Power and Services area of the plant, the permittee shall meet all requirements of the most current revision of permit R14-14. The permittee shall also meet the 112(j) case-by-case Boiler MACT requirements listed below. Changes to case-by-case Boiler MACT requirements shall not be less stringent than what is listed below.

4.1.1.1. The permittee shall operate and maintain Boiler No. 8 [P31], including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing air emissions at all times.

4.1.1.2. The case-by-case Boiler MACT limit for CO as a surrogate for organic HAP is 113 ppmvd corrected to 3% O2.

4.1.1.3. The case-by-case MACT limit for Total PM including condensables as a surrogate for metallic HAPs is 0.008 lb/MMBTU.

4.1.1.4. The permittee shall implement an energy efficiency plan. The permittee may meet this requirement by participating in a corporate led program such as the DuPont Corporate Bold Energy Plan or a similar subsequent program.

4.1.2. For the natural gas-fired Dowtherm® vaporizers, process heater No. 3 [152Z-V3/33-S] and process heater No. 4 [152Z-V4/44-S] located in the Nylon® area of the plant; the permittee shall meet all requirements of the most current revision of permit R13-1145. The permittee shall also meet the 112(j) case-by-case Boiler MACT requirements listed below. Changes to case-by-case Boiler MACT requirements shall not be less stringent than what is listed below.

4.1.2.1. The permittee must operate and maintain 152Z-V3/33-S and 152Z-V4/44-S process heaters, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions at all times.

4.1.2.2. The case-by-case MACT limit for CO as a surrogate for organic HAP is 47 ppmvd corrected to 3% O2.

4.1.2.3. The case-by-case MACT limit for Total PM limit including condensables as a surrogate for metallic HAPs is 0.01 lb/MMBTU.

4.1.3. For the natural gas-fired Dowtherm® process heaters, MPW No. 1 Vaporizer, MPW No. 2 Vaporizer, MPW No. 5 Vaporizer, and MPW No. 6 Vaporizer [254-01S, 254-02S, 254-05S, and 254-06S] located in the Nylon® Polymer area of the plant, the permittee shall meet all requirements of the most current revision of permit R13-1686. The permittee shall also meet the 112(j) case-by-case Boiler MACT requirements listed below. Changes to case-by-case Boiler MACT requirements shall not be less stringent than what is listed below.

4.1.3.1. The permittee must operate and maintain process heaters [254-01S, 254-02S, 254-05S, and 254-06S], including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions at all times.

4.1.3.2. The case-by-case MACT limit for CO as a surrogate for organic HAP is 47 ppmvd corrected to 3% O2.

4.1.3.3. The case-by-case MACT limit for Total PM limit including condensables as a surrogate for metallic HAPs is 0.02 lb/MMBTU".

4.1.4. For the natural gas-fired process heaters TICA, TICB, TICC, and TICD, the permittee shall meet all requirements of the most current revision of permit R13-1823. The permittee shall also meet the 112(j) case-by-case Boiler MACT requirements listed below. Changes to case-by-case Boiler MACT requirements shall not be less stringent than what is listed below.

4.1.4.1. The permittee must operate and maintain the process heaters [TICA, TICB, TICC, and TICD], including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions at all times.

4.1.4.2. The case-by-case MACT limit for CO as a surrogate for organic HAP as corrected to 3% O2 for each of the emission points below.

TICA	115 ppmvd CO at 3% O_2
TICB	124 ppmvd CO at 3% O_2
TICC	124 ppmvd CO at 3% O_2
TICD	107 ppmvd CO at 3% O_2

4.1.4.3. Add the case-by-case MACT limit for Total PM including condensables as a surrogate for metallic HAPs for each of the emission points below:

TICA	0.007 lb PM/MMBTU
TICB	0.008 lb PM/MMBTU
TICC	0.008 lb PM/MMBTU
TICD	0.007 lb PM/MMBTU;

4.1.5. For the comparable fuels boiler [DOMS] in the Acetal Resins area of the plant, the permittee shall meet all requirements of the current revision of permit R13-1849. The permittee shall also meet the 112(j) case-by-case Boiler MACT requirements listed below. Any changes to the case-by-case Boiler MACT requirements shall not be less stringent than what is listed below.

4.1.5.1. The permittee must operate and maintain the Comparable Fuels Boiler [DOMS] including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions at all times.

4.1.5.2. The case-by-case MACT limit for CO as a surrogate for organic HAP is 135 ppmvd corrected to 3% O2.

4.1.5.3. The case-by-case MACT limit for total organic HAP (formaldehyde, hexane, methanol, and toluene) is 0.185 lb/MMBTU.

4.1.5.4. The case-by-case MACT limit for PM10 is 0.023 lb/MMBTU as a surrogate for metallic HAPs

4.1.5.5. The permittee shall implement an energy efficiency plan. The permittee may meet this requirement by participating in a Corporate led program such as the DuPont Corporate Bold Energy Plan or a similar subsequent program.

Changes to be incorporated into referenced permit conditions

4.1.6. The permittee shall update permit R14-14 for Boiler No. 8 [P31] to include: (1) a reference to the 112(j) case-by-case Boiler MACT requirements established in the most current version of permit R13-2838, and (2) that changes to any case-by-case Boiler MACT requirements shall not be less stringent than required by R13-2838. A Class I administrative update permit application shall be submitted to WVDAQ within 90 days following the effective date of this permit.

4.1.7. The permittee shall update permit R13-1145D for process heaters [152Z-V3/33-S] and [152Z-V4/44-S] to include: (1) a reference to the 112(j) case-by-case Boiler MACT requirements established in the most current version of permit R13-2838; and (2) that changes to any case-by-case Boiler MACT requirements shall not be less stringent than required by R13-2838. A Class I administrative update permit application shall be submitted to WVDAQ within 90 days following the effective date of this permit.

4.1.8. The permittee shall update permit 13-1823I for process heaters TICA, TICB, TICC, and TICD to include: (1) a reference to the 112(j) case-by-case Boiler MACT requirements established in the most current version of permit R13-2838; (2) that changes to any case-by-case Boiler MACT requirements shall not be less stringent than required by R13-2838. A Class I administrative update permit application shall be submitted to WVDAQ within 90 days following the effective date of this permit; and (3) remove condition 4.1.17 from R13-1823H.

4.1.9. The permittee shall update permit 13-1849G for the Comparable Fuels Boiler [DOMS] to include: (1) a reference to the 112(j) case-by-case Boiler MACT requirements established in the most current version of permit R13-2838, and (2) that changes to any case-by-case Boiler MACT requirements shall not be less stringent than required by R13-2838. A Class I administrative update permit application shall be submitted to WVDAQ within 90 days following the effective date of this permit.

4.2. Monitoring Requirements

4.2.1. The permittee shall conduct an annual (plus or minus 2 months) tune-up of the natural gas-fired boiler [P31]. If the boiler is not operating at the scheduled time for the next tune-up, it shall be conducted within 7 days of boiler restart.

4.2.2. Natural gas boilers and process heaters rated >10 MMBTU/hr and < 100 MMBTU/hr, shall have a general overhaul on no longer than a 24 month cycle (plus or minus 3 months). To demonstrate continuous compliance, the CO compliance tune-ups shall occur periodically beginning with the first 21 to 27 months after the permit is effective (24 months +/- 3 months).

4.2.3. The tune-up requirements for natural gas-fired boilers/process heaters shall include at a minimum the following as applicable to the specific unit design:

a. Inspect the burner, and clean or replace any components of the burner as necessary;
b. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern consistent with the manufacturer's specifications;
c. Inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly;
d. Optimize total emissions of CO consistent with the manufacturer's specifications.
e. Measure the concentration in the effluent stream of CO in ppmvd before and after the adjustments are made; and
f. Maintain on-site and submit, if requested by the Director, an annual report containing the information below:

i. The concentrations of CO in the effluent stream in ppmvd, and oxygen in percent dry basis, measured before and after the adjustments of the boiler;
ii. A description of any corrective actions taken as a part of the combustion adjustment; and
iii. The type and amount of fuel used over the 12 months prior to the annual adjustment.

4.2.4. For each affected source with112(j) case-by-case Boiler MACT CO emission limits for which continuous oxygen trim control is not utilized, the permittee shall conduct a periodic combustion check using existing non-compliance combustibles CEM or a portable CO/O_2 analyzer once every 6 months of run time, plus or minus 2 months. Units utilizing continuous oxygen trim do not need periodic combustion checks, but the oxygen analyzer shall have the calibration checked once every 6 months of run time (plus or minus 2 months).

4.3. Testing Requirements

Reserved

4.4. Recordkeeping Requirements

4.4.1. The permittee shall meet all applicable recordkeeping requirements of §63.10 of Subpart A to the National Emission Standards for Hazardous Air Pollutants for Source Categories.

4.4.2. The permittee shall maintain and make available for inspection applicable records, logs, reports and/or notifications pertaining to malfunction events for at least 5 years. At a minimum, the most recent 2 years shall be retained on site, while the remaining 3 years of data may be kept and an off-site storage location. The startup, shutdown, and malfunction records may be maintained on microfilm, electronic storage medium, microfiche or hard copy.

4.4.3. For each boiler or process heater subject to an emission limit, the permittee shall maintain records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used and the hours of operation.

4.4.4. The permittee shall maintain records of the conversion of emission rates and limits for Carbon Monoxide to ppmvd corrected to 3% oxygen; Total organic HAP converted to lb/MMBTU; and for Particulate Matter to lb/MMBTU for the purpose of demonstrating compliance with the case-by-case Boiler MACT limits.

4.4.5. A copy of each notification and report that was submitted to demonstrate compliance with the case-by-case Boiler MACT, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that was submitted shall be maintained.

4.4.6. Records of performance stack tests, fuel analyses, or other compliance demonstrations, performance evaluations, and opacity observations as required in §63.10(b)(2)(viii) shall be maintained.

4.4.7. For each CEMS, CPMS, and COMS, the permittee shall maintain records according to:

4.4.7.1. Records described in §63.10(b)(2)(vi) through (xi);
4.4.72. Monitoring data for continuous opacity monitoring system during a performance evaluation as required in §63.6(h)(7)(i) and (ii);

4.4.7.3. Previous (superseded) versions of the performance evaluation plan as required in §63.8(d)(3);

4.4.7.4. Request for alternatives to relative accuracy test for CEMS as required in §63.8(f)(6)(i);

4.4.7.5. Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

4.4.8. To demonstrate compliance with each applicable emission limit and operating limit, the permittee shall keep the required records including records of all monitoring data and calculated averages for applicable operating limits for opacity.

4.5. Reporting Requirements

4.5.1. The permittee shall meet all applicable notification requirements of §63.9, recordkeeping requirements of §63.10, and monitoring notifications required by §63.8(e), (f)(4) and (f)(6) of Subpart A to the National Emission Standards for Hazardous Air Pollutants for Source Categories.

4.5.2. The permittee shall submit a signed statement in the Notification of Compliance Status report within 60 days after the completion of the initial boiler/process heater tune-up that indicates that the tune-up of the boiler/process heater has been conducted.

4.5.3.. In addition to the information required in §63.9 (h)(2) (Subpart A, Notification requirements), the notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

4.5.3.1. "This facility complies with the requirements to conduct tune-up(s) of the unit(s) for natural gas boilers/process heaters as defined in Section 4.2 of this permit;

4.5.3.2. "This facility has had an energy assessment performed as required by Section 4.1 of this permit;"

4.5.3.3. "The energy assessment is an accurate depiction of the facility";

4.5.3.4. "No secondary materials that are solid waste were combusted in any affected unit".

4.5.4. The permittee shall include the case-by-case Boiler MACT requirements in all submitted reports.

4.5.5. A compliance report shall be submitted semiannually.

4.5.5.1. The first compliance report must cover the period beginning on the compliance data that is specified for your affected source and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the specified compliance date.

4.5.5.2. The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the specified compliance date.

4.5.5.3. Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

4.5.5.4. Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

4.5.5.5. For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR60.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), the permittee may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of the dates in this section.

4.5.6. The compliance report must contain the following information:

4.5.6.1. Company name and address;
4.5.6.2. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;
4.5.6.3. Date of report and beginning and ending dates of the reporting period;
4.5.6.4. The total fuel use by each affected source subject to an emission limit, for each calendar month within the semiannual reporting period, including but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by EPA or the basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure;
4.5.6.5. A summary of the results of the annual performance tests and documentation of any operating limits that were reestablished during this test, if applicable. If the stack test is being conducted once every three years, the date of the last three stack tests, a comparison of the emission level achieved in the last three stack tests to the 90 percent emission limit threshold, and a statement as to whether there have been any operational changes since the last stack test that could increase emissions;
4.5.6.6. A signed statement indicating that no new types of fuel were burned.
4.5.6.7. If there are no deviations from any emission limits or operating limits, a statement that there were no deviations from the emission limits or operating limits during the reporting period.
4.5.6.8. If there were no deviations from the monitoring requirements including no periods during which the CMSs were out of control as specified in §63.8(c)(7), a statement that there were no deviations and no periods during which the CMS were out of control during the reporting period.
4.5.6.9. If there was a startup, shutdown, or malfunction during the reporting period and actions were taken consistent with the startup, shutdown, and malfunction plan, the compliance report shall include the information in §63.10.(d)(5)(i).

4.5.7. The permittee shall report all deviations in the semiannual monitoring report

4.5.8. The permittee shall provide all of the required information for the deviation report in their semiannual monitoring report. The permittee may provide the required deviation information in a compliance report; however, submission of a compliance report does not otherwise affect any obligation the permittee may have to report deviations from permit requirements to the permit authority.

4.5.9. For each deviation from an emission limit or operating limit that occurs at an affected source where a CMS is not being used to comply with that emission limit or operating limit, the compliance report must additionally contain the following information:

4.5.9.1. The total operating time of each affected source during the reporting period;
4.5.9.2. A description of the deviation and which emission limit or operating limit that was deviated;
4.5.9.3. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.
4.5.9.4. A copy of the test report if the annual performance test showed a deviation from the emission limits.

4.5.10. For each deviation from an emission limit, operating limit, and monitoring requirement occurring at an affected source where a CMS is being used to comply with that emission limit, or operating limit, the information listed below must be included. This includes any deviations from the site-specific monitoring plan.

4.5.10.1. The date and time that each deviation started and stopped and description of the nature of the deviation (i.e. what was deviated from);
4.5.10.2. The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks;
4.5.10.3. The date, time, and duration that each CMS was out of control, including the information is §63.8 (Subpart A, Monitoring requirements);
4.5.10.4. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period;
4.5.10.5. A summary of the total duration of the deviation during the reporting period and of the total source operating time during that reporting period;
4.5.10.6. An analysis of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes;
4.5.10.7. A summary of the total duration of CMSs downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period;
4.5.10.8. An identification of each parameter that was monitored at the affected source for which there was a deviation;
4.5.10.9. A brief description of the source for which there was a deviation;
4.5.10.10. A brief description of each CMS for which there was a deviation;
4.5.10.11. The date of the latest CMS certification or audit for the system for which there was a deviation;
4.5.10.12. A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

4.5.11. After December 31, 2012, within 120 days after the date of completing each performance evaluation conducted to demonstrate compliance with the case-by-case Boiler MACT, the permittee must submit the test data to EPA by entering the data electronically into EPA's WebFIRE data base through EPA;s Central Data Exchange. The permittee shall enter the test data into EPA's data base using the Electronic Reporting Tool or other compatible electronic spreadsheet. Only performance evaluation data collected using methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

4.5.12. Routing reports required to be submitted to the Director must be postmarked by the 30th day following the end of each calendar quarter.

5.0. Source-Specific Requirements [Coal-Fired Boilers P02, P03, P04, P05, and P06]

5.1. Limitations and Standards

5.1.1. Boiler No. 1 [P01] shall be placed in an extended idle condition on the effective date of this permit and the existing Boiler No. 1 breeching connection to Stack 4575 shall be blanked. Boiler No. 1 shall not be operated without starting-up in compliance with all applicable requirements and obtaining the required permits.

5.1.2. The coal fired boilers shall meet all applicable requirements of 45CSR2. The permittee shall update the 45 CSR2/2A monitoring plan as necessary to include the 112(j) case-by-case Boiler MACT requirements within 180 days following the effective date of this permit.

5.1.3. The coal fired boilers shall meet all applicable requirements of 45CSR10.

5.1.4. The coal fired boilers shall only use bituminous coal as fuel.

5.1.5. Bag Houses and mechanical dust collectors [P102C], [P103C], [P104C], [P105C], and [P106C] shall be in operation at all times when the corresponding coal fired boiler is in operation.

5.1.6. The permittee shall implement an energy efficiency plan. The permittee may meet this requirement by participating in a corporate led program such as the DuPont Corporate Bold Energy Plan or a similar subsequent program.

5.1.7. The case-by-case 112(j) coal-fired Boiler MACT limits established in this permit apply at all times except during startups, shutdowns and malfunctions. Operating records shall document the occurrence of these events. The permittee shall maintain and operate any coal-fired boiler and associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times.

5.1.8. The permittee shall have a Startup and Shutdown (SS) Plan for coal fired boilers P02, P03, P04, P05, and P06 to ensure that the coal fired boilers and their control devices are operated in a manner consistent with safety and good air pollution control practices designed to minimize air emission levels. At a minimum, the SS Plan shall include startup operating procedures and shutdown operating procedures. Modifications may be made to the SS Plan as necessary to satisfy the requirements of regulations, or to reflect changes in equipment or procedures at the affected source. These modifications may be made without prior approval from the Administrator or the permitting authority unless specifically provided otherwise by the permitting authority.

5.1.9. The permittee shall have a Malfunction Plan for coal fired boilers P02, P03, P04, P05, and P06 to ensure that during malfunctions the coal fired boilers and their control devices are operated in a manner to correct the malfunctions as soon as practicable after the occurrence in order to minimize air emission levels. At a minimum, the Malfunction Plan shall include the definition of "malfunction", the general response steps to be followed, and specific corrective action to be taken for anticipated causes of malfunctions. Modifications may be made to the Malfunction Plan as necessary to satisfy the requirements of regulations, or to reflect changes in equipment or procedures at the affected source. These modifications may be made without prior approval from the Administrator or the permitting authority unless specifically provided otherwise by the permitting authority.

5.1.10. The Startup and Shutdown Plan and the Malfunction Plan shall be in effect by the permit effectiveness date.

5.1.11. Prior to the completion of the initial performance tests, the permittee shall operate the coal fired boilers and associated pollution control equipment utilizing normal dust collector and baghouse operation; initiate operation of the sorbent injection system according to Appendix B, and institute the coal chlorine and mercury specification limits.

5.1.12. Following the date on which the initial performance test is completed, the permittee shall not operate the boilers and associated pollution control devices above any of the maximum operating limits or below any of the minimum operating limits established during testing. Operation above the established maximum or below the established minimum operating limits shall constitute a deviation from established operating limits. Operating limits must be confirmed or reestablished during subsequent performance tests.

5.1.13. **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.]

Carbon Monoxide (CO) as a surrogate for organic HAP

5.1.14. CO emissions as a surrogate for organic HAP shall not exceed 133 ppmvd@7% O_2 based on the average of three 1-hour test runs (88 ppmvd corrected to 3% O_2).

5.1.15. Initial performance testing for CO on the coal fired boilers [P02, P03, P04, P05, and P06] shall be conducted within 12 months of the permit effectiveness date.

5.1.16. Compliance with the CO limit shall commence on the permit effectiveness date.

Particulate Matter (PM filterable) as a surrogate for non-mercury metallic HAP

5.1.17. PM filterable emissions as a surrogate for non-mercury metallic HAP shall not exceed 0.04 lbs/MMBTU .

5.1.18. Initial PM (front half) performance testing for each of the coal fired boilers shall be conducted within 12 months of the permit effectiveness date.

5.1.19. Each of the baghouses [P102C, P103C, P104C, P105C, and P106C] shall be maintained in good working order through preventative maintenance and inspected on an annual basis.

5.1.20. Each of the single-stage mechanical dust collectors [P102C, P103C, P104C, P105C, and P106C] shall be maintained in good working order through preventative maintenance and inspected on an annual basis.

Opacity

5.1.21. Opacity shall be maintained to less than or equal to 10 percent based on a 2 hour block average.

Mercury (Hg)

5.1.22. Mercury emissions shall not exceed 6 lb/trillion BTU based on a 12 month rolling average.

5.1.23. The sorbent injection system to control mercury shall be in operation at all times that any of the coal-fired boilers are in operation. Initial start-up of the sorbent injection system shall follow the schedule provided in Appendix B.

5.1.24. Initial performance testing of mercury and operations optimization of each coal-fired boiler shall be completed within 12 months of the permit effectiveness date.

5.1.25. The sorbent injection system and control system shall be maintained in good working order through preventative maintenance

5.1.26. The permittee shall operate the sorbent injection system within the operating conditions and sorbent injection rates determined for each boiler during the initial mercury performance test. DuPont shall operate the sorbent system at no lower than a Ca/S ratio of 0.1 following initial start-up and activation of the system and prior to the completion of initial performance testing.

5.1.27. The permittee shall demonstrate compliance by emission averaging, if the averaged emissions are within 90 percent of the applicable emission limit according to the procedures below:

5.1.27.1. For each boiler in the averaging group, the emission rate achieved during the initial compliance test for mercury must not exceed the emission level that was being achieved on March 30, 2009 or the control technology employed during the initial compliance test must not be less effective for mercury being averaged than the control technology employed March 30, 2009.

5.1.27.2. The averaged emissions rate from the boilers in the emissions averaging option shall be in compliance with the emission limit in section 5.1.22 at all times in accordance with the sorbent system schedule provided in Appendix B.

5.1.27.3. The permittee shall demonstrate initial compliance according to:

Use Equation 1 of this section to demonstrate that the mercury emissions from all existing units participating in the emissions averaging option do not exceed the emission limit in section 5.1.22.

$$AveWeighted\ Emissions = 0.90 \times \sum_{i=1}^{n} (Er \times Hm) \div \sum_{i=1}^{n} Hm \qquad \text{(Eq. 1)}$$

Where:
AveWeighted Emissions = Average weighted mercury emissions in units of pounds per million BTU of heat.
Er = Emissions rate (as calculated according to section 5.3.13 of this permit)
Hm = Maximum rated heat input capacity of unit, i, in units of million BTU per hour.
n = Number of units participating in the emissions averaging option.
0.90 = Required discount factor.

5.1.27.4. The permittee shall demonstrate compliance on a monthly basis determined at the end of every month (12 times per year) according to this section. The first monthly period begins on the compliance date specified in Appendix B. Each month during the first 12 month period will determine average emissions using all previous months' results. Each month after the first 12 months will use the most recent month and the 11 months prior to determine the 12 month rolling average.

(a) For each calendar month, the permittee shall use the hourly sorbent injection rate and steam output data in Equation 2 to calculate the monthly average weighted emission rate using the actual heat capacity for each existing unit participating in the emissions averaging option. Each boiler's initial performance test would provide the percent reduction in mercury emissions relative to incoming coal mercury content at a sorbent injection Ca/S stoichiometric ratio at or above the minimum effective injection rate. That control level shall be used to calculate boiler performance.

$$AveWeighted\ Emissions = 0.90 \times \sum_{i=1}^{n} (Er \times Hb) \div \sum_{i=1}^{n} Hb \qquad \text{(Eq. 2)}$$

Where:
AveWeighted Emissions = Average weighted mercury emissions in units of pounds per million BTU of heat.
Er = Emissions rate (as calculated according to section 5.3.13 of this permit)
Hb = The average heat input for each calendar month of boiler, i, in units of million BTU.
n = Number of units participating in the emissions averaging option.
0.90 = Required discount factor.

5.1.27.5 Until twelve monthly weighted average emission rates have been accumulated, the permittee shall calculate and report only the monthly average weighted emission rate determined under section 5.1.27.4 of this permit. After 12 monthly weighted average emission rates have been accumulated, for each subsequent calendar month, the permittee shall use Equation 3 below to calculate the 12-month rolling average of the monthly weighted average of the monthly weighted average emission rates for the current month and the previous 11 months.

$$Eavg = \sum_{i=1}^{n} ERi / 12 \qquad \text{(Eq. 3)}$$

Where:

Eavg = 12-month rolling average emission rate, (pounds per million Btu heat input)
ERi = Monthly weighted average, for month "i", (pounds per million Btu heat input) (as calculated by Eq. 2)

5.1.27.6. The permittee shall develop and submit to the Director for review and written approval an implementation plan for emission averaging according to:

(a) The implementation plan shall be submitted according to the sorbent system start-up plan in Appendix B.

(b) The permittee shall include the following information in the implementation plan for all emission sources included in an emissions average.

i) The identification of all existing boilers in the averaging group, including for each either the applicable HAP emission level or the control technology installed and the date on which you are requesting emission averaging to commence;
ii) The process parameter (heat input or steam generated) that will be monitored for each averaging group;
iii) The specific control technology or pollution prevention measure to be used for each emission boiler in the averaging group and date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple boilers or process heaters, the permittee must identify each boiler;
iv) The test plan for the measurement of mercury emissions;
v) The operating parameters to be monitored for each control system or device and a description of how the operating limits will be determined;
vi) A demonstration that compliance with the emission limits will be achieved under representative operating conditions.

vii) The proposed initial compliance test procedure shall include determining mercury emission control performance based on operating conditions including boiler steam output rate (Mpph), heat input per emissions testing and standard F-Factor (MMBTU/hr) to determine the MMBTU heat input per lbs steam generated conversion factor (Cf), coal quality including sulfur content (percent on an As-Received basis), coal mercury content (ppb on a dry basis), and coal heating value (BTU/lb on an As-Received and dry HHV basis). This data shall be used to determine coal input equivalent Hg with no reduction as lb Hg/TBTU. That shall be used with loss-in-weight sorbent feed system determined sorbent injection rates (lb/hr), and the controlled Hg emission rate emission test (lb/TBTU) at a known sorbent injection Ca/S stoichiometric ratio, to determine equivalent percent Hg reduction at that actual Ca/S ratio (considered constant as long as above the minimum effective injection rate as Ca/S ratio).

(c) The lime injection control methodology plan shall be described in detail.

HCl compliance alternative as surrogate for inorganic HAPs

5.1.28. The significant coal fired boilers' HBCA parameters are provided in the table below:

Boiler No.	Emission Point	Maximum Design Heat Input (MMBTU/hr)	Stack Height (ft.)	Stack Exit Diameter (ft.)	Minimum Stack Flue Gas Temperature (^{0}F)	Minimum stack distance to the fenceline (ft.)
2	475 (Stack 1)	64.2	150	6.0	330	404
3	476 (Stack 2)	94	150	7.5	332	404
4		125				
5	477 (Stack 3)	181	150	9.0	364	404
6		241				

5.1.29. The permittee shall update the HBCA eligibility demonstration and resubmit it each time that any of the parameters that defined the affected source as eligible for the health-based compliance alternatives changes in a way that could result in increase HAP emissions or increased risk from exposure to emissions. These parameters include, but are not limited to, fuel type, fuel mix (annual average), type of control devices, HAP emission rate, stack height, process parameters (e.g. heat input capacity), relevant reference values, and locations where people live).

5.1.30. If the HBCA eligibility demonstration is being updated that is under the permittee's control (e.g. change in heat input capacity of the boiler), the permittee shall submit a revised eligibility demonstration to the permitting authority prior to making the change. The permit shall be revised as appropriate to incorporate the change. If the HBCA eligibility demonstration is being updated that is outside the permittee's control, (e.g. change in a reference value), the permittee shall submit a revised eligibility demonstration to the permitting authority no later than 60 days following the change. The permit shall be revised as appropriate to incorporate the change.

5.1.31. The permittee shall not exceed 240 lb/hr of total equivalent HCl emissions from all coal-fired boilers [P02], [P03], [P04], [P05], and [P06] based on a 12 month rolling average.

5.1.32. Compliance with the total equivalent HCl emission rate shall commence on the permit effectiveness date.

5.1.33. The permittee shall not exceed 1,400 ppm chlorine content of coal (dry basis as-burned) on a 12 month rolling average.

5.2. Monitoring Requirements

5.2.1. The permittee shall meet all applicable monitoring requirements of 63.8, of the General Provisions section of the National Emission Standards for Hazardous Air Pollutants for Source Categories.

5.2.2. If the permittee demonstrates compliance with any applicable emission limit through performance stack testing, the permittee shall develop a site specific monitoring plan according to the following:

5.2.2.2. For each Continuous Monitoring System (CMS) required, the permittee must develop, and submit to the permitting authority for approval upon request, a site-specific monitoring plan that addresses the following:

a. Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);
b. Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and
c. Performance evaluation procedures and acceptance criteria (e.g., calibrations).
d. Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1)(i) and (ii), (c)(3), and (c)4)(ii);
e. Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d); and
f. Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §.10(c), (e)(1), and (e)(2)(i).

The permittee shall submit the site-specific monitoring plan at least 60 days before the initial performance evaluation of the CMS.

5.2.2.3. The permittee shall conduct a performance evaluation of each CMS in accordance with the site-specific monitoring plan.

5.2.2.4. The permittee shall operate and maintain the CMS in continuous operation in accordance with the site-specific monitoring plan.

5.2.3. The permittee shall monitor and collect data according to:

5.2.3.1. The site-specific monitoring plan,
5.2.3.2. Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), the permittee shall monitor continuously (or collect data at all required intervals) at all times that the affected source is operating.
5.2.3.3. The permittee shall not use data recorded during monitoring malfunctions, associated repairs, or required quality assurance or control activities in data averages and calculations used to report emission or operating levels. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system.

Carbon Monoxide (CO)

5.2.4. The permittee shall conduct an annual tune-up on Boiler No. 2 [P02] and Boiler No. 3 [P03]. The tune-up must be conducted between 10 and 14 months after the previous tune-up. If the boiler is not operating at the scheduled time for the next tune-up, it shall be conducted within 7 days of boiler restart.

5.2.5. To demonstrate compliance with the CO emission limit, the permittee shall conduct an annual performance test. The annual CO performance tests for Boilers No. 4, No. 5, and No. 6 must be completed between 10 and 12 months after the previous performance test, unless the permittee follows the requirements listed in 5.2.6.

5.2.6. The permittee can conduct a CO performance stack test less often if the performance stack tests for the pollutant for at least three (3) consecutive years show that the emissions are at or below 85 percent of the emission limit, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, the performance test does not have to be conducted for the next 2 years. The performance test must be conducted during the third year and no more than 36 months after the previous performance test.

Particulate Matter (PM filterable)

5.2.7. Annual PM performance testing for the coal fired boilers shall be performed between 10 and 12 months after the previous performance test, unless the permittee follows the requirements listed in 5.2.8.

5.2.8. The permittee may conduct a PM filterable performance stack test less often if the performance stack tests for the pollutant for at least three (3) consecutive years show that the emissions are at or below 85 percent of the emission limit, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, the performance test does not have to be conducted for the next 2 years. The performance test must be conducted during the third year and no more than 36 months after the previous performance test.

5.2.9. The differential pressure across each of the baghouses shall be monitored according to operating procedures when the baghouses are in operation.

Opacity

5.2.10. The permittee shall install, maintain, and operate a Continuous Opacity Monitoring System (COMS) according to 45CSR2/2A, 40 CFR 63.8, and Performance Standard 1 of 40 CFR part 60, Appendix B.

5.2.11. Compliance with opacity monitoring using the COMS on the coal-fired boilers shall commence on the permit effectiveness date.

5.2.12. As specified in §63.8(c)(4)(i), each COMS is to complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

5.2.13. The permittee shall reduce data per 63.8(g)(2).

5.2.14. The site-specific COMS monitoring plan procedures and acceptance criteria for operating and maintaining each COMS shall be in accordance with the requirements in §63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

5.2.15. The permittee shall operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of §63.8(e). Periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit shall be identified. Any 60-minute period for which the monitoring system is out of control and data are not available for required calculations constitute a deviation from the monitoring requirements. An excursion is defined as two consecutive 1-hour block averages greater than 10%.

5.2.16. The permittee shall determine and record all the 6-minute averages (and 1-hour block averages as applicable) collected for periods during which the COMS is not out of control.

5.2.17. The Quality Assurance plan shall be the basis for assessing and maintaining the quality of the COMS data.

5.2.18. When COMS data is not available, the permittee may use Method 9 readings, or any other appropriate method to produce credible data.

5.2.19. Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall monitor continuously (or collect data at all required intervals) at all times that the coal fired boiler is in operation.

5.2.20. The permittee shall not use data recorded during monitoring malfunctions, associated repairs, or required quality assurance or control activities in data averages and calculations used to report emission or operating levels. All the data collected during all other periods in assessing the operation of the control device and associated control system shall be used.

Mercury (Hg)

5.2.21. The boilers shall use sorbent and the sorbent control system to control mercury emissions in accordance with the sorbent injection control methodology at any time when the boilers are in operation.

5.2.22. Sorbent injection rate as a Ca:S (Calcium:Sulfur) ratio shall be monitored by the PLC Sorbent weight control system. The operating limits for the sorbent injection rate shall be determined during the initial performance testing. The permittee shall maintain the minimum sorbent injection rate at or above the operating levels established during the initial performance test. The Ca:S ratio will be determined on a 3-hour block average basis for use in calculating the 12-month rolling average emission rate.

5.2.23. The sorbent injection feed rate measurements system shall:

5.2.23.1. Be located in a position(s) that provides a representative measurement of the total sorbent injection rate;
5.2.23.2. Be installed and calibrated in accordance with manufacturer's procedures and specifications;
5.2.23.3. Be calibrated according to the manufacturer's procedures and specifications at a minimum frequency of once every 12 months.

5.2.24. Annual mercury performance testing for the coal fired boilers shall be conducted between 10 and 12 months after the previous performance test, unless the permittee follows the requirements listed in 5.2.25.

5.2.25. The permittee can conduct a mercury performance stack test less often if the performance stack tests for the pollutant for at least three (3) consecutive years show that the emissions are at or below 85 percent of the emission limit, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, the performance test does not have to be conducted for the next 2 years. The performance test must be conducted during the third year and no more than 36 months after the previous performance test.

Coal Sampling and Analysis

5.2.26. Coal sampling shall be conducted in accordance with Classification I-B-I in ASTM D2234 and the permittee shall conduct period spot checks of the coal quality against the purchase specification.

5.2.27. The coal samples taken from the sampler are gathered to form a single representative total daily sample. The daily sample shall then be mixed and quartered to obtain the daily coal sample for analysis. This is considered the daily "as-burned" fuel. A uniform portion of the daily samples shall be retained to create a monthly composite to be analyzed to determine the monthly mercury content, the monthly sulfur content, the monthly average heating value, and the monthly average chlorine content.

5.2.28. The permittee shall conduct a monthly fuel analysis according to the coal analysis requirements provided in the Testing Section 5.3 of this permit.

5.3. Testing Requirements

5.3.1. The permittee shall conduct all performance tests according to §63.7.

5.3.2. The permittee shall demonstrate initial compliance with each emission limit by conducting initial performance tests (performance stack tests and fuel analyses) and establishing operating limits, as applicable.

5.3.3. If the permittee demonstrates compliance through performance stack testing, site-specific operating limits shall be established. The permittee must also conduct fuel analyses according to the coal analysis requirements of this permit.

Coal analysis for performance testing

5.3.4 The permittee shall develop and submit a site-specific fuel analysis plan for review and approval. The permittee shall submit the fuel analysis plan no later than 60 days before the date intended to demonstrate compliance. The plan shall include the following:

5.3.4.1. The identification of all fuel types anticipated to be burned in each boiler;
5.3.4.2. For each fuel type, who will be conducting the analysis (permittee, vendor, outside testing facility);
5.3.4.3. For each fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the composite samples if the procedures are different from 5.3.5 or 5.3.6 of this section. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types.
5.3.4.4. For each fuel type, the analytical methods from 5.3.7, with the expected minimum detection levels, to be used for the measurement of chlorine or mercury.
5.3.4.5. If the permittee requests to use an alternative analytical method, also include a detailed description of the methods and procedures that are being proposed to be used.

5.3.5 At a minimum, the permittee shall obtain three composite fuel samples for each fuel type. When sampling from a belt (or screw) feeder, collect fuel samples according to:

5.3.5.1. Stop the belt and withdraw a 6-inch wide sample from the full cross-section of the stopped belt to obtain a minimum two pounds of sample. All the materials (fines and coarse) must be collected in the full cross-section. The sample shall be transferred to a clean plastic bag. Alternatively, an automatic cross-belt sample can be used without stopping the belt.
5.3.5.2. Each composite sample shall consist of a minimum of three samples collected at approximately equal 1-hour intervals during the test period.

5.3.6 Each composite sample must be prepared according to:

5.3.6.1. Thoroughly mix and pour the entire composite sample over a clean plastic sheet;

5.3.6.2. The samples larger than 3 inches must be broken into smaller sizes;
5.3.6.3. Make a pie shape with the entire composite sample and divide it into for equal parts;
5.3.6.4. Separate one of the quarter samples and obtain a one-quarter subset from this sample;
5.3.6.5. If this subset is too large for grinding, repeat the procedure 5.3.6.3 with the quarter sample and obtain a one-quarter subset from this sample;
5.3.6.6. Grind the sample in a mill;
5.3.6.7. Use procedure in #3 to obtain a one-quarter subsample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

5.3.7. Determine the concentration of mercury and chlorine in units of pounds per million BTU of each composite sample for each fuel type according to the procedures in the table below:

Testing requirement	Method
5.3. 7.1 Collect fuel samples	Section 5.3.7 of this permit or ASTM D2234-D2234M-03 or equivalent
5.3.7.2 Composite fuel samples	Section 5.3.8 of this permit or equivalent
5.3. 7.3 Prepare composited fuel samples	ASTMD2013-04 or equivalent
5.3.7.4 Determine heat content	ASTM D5865-04 or equivalent
5.3.7.5 Determine moisture content	ASTM D3173-03, ASTM E871-82, or equivalent
5.3.7.6 Measure mercury concentration	ASTM D6722-01 or equivalent
5.3.7.7 Convert concentration into units of pounds of pollutant per MMBTU of heat content	Method 19 F-factor methodology in appendix A to 40 CFR Part 60
5.3.7.8 Measure the hydrogen chloride and chlorine concentration in fuel sample	SW-846-9250, ASTM D6721-01, or equivalent
5.3.7.9 Convert concentrations into units of pounds of pollutant per MMBTU of heat content	Method 19 F-factor methodology in appendix A to 40 CFR Part 60

Carbon Monoxide (CO)

5.3.8. During the annual tune-up required by 5.2.4 of this permit, the permittee shall measure the concentration of CO both before and after said adjustment. The method of said measurement may be any suitable handheld or continuous device with a manufacturer guaranteed relative accuracy of at least ±10%.

5.3.9. Initial CO performance tests on the coal fired boilers and the annual CO performance testing on Boilers No. 4, Boilers No. 5, and Boilers No. 6 shall be conducted according to the methods listed below.

Testing requirement	Method
5.3.9.1 Select the sampling ports location and the number of traverse points.	Method 1 in appendix A to 40 CFR part 60.
5.3.9.2 Determine oxygen and carbon dioxide concentrations of the stack gas.	Method 3A or 3B in appendix A to 40 CFR part 60.
5.3.9.3 Measure the moisture content of the stack gas.	Method 4 in appendix A to CFR part 60.
5.3.9.4 Measure the CO emission concentration	Method 10, 10A, or 10B in appendix A to 40 CFR part 60.

Particulate Matter (PM filterable)

5.3.10. The permittee shall conduct the COMS initial certification tests for the coal fired boilers in accordance with 40 CFR60, Appendix B, Performance Standard 1.

5.3.11. The permittee shall conduct the initial PM performance test for the coal fired and the annual PM performance testing shall be conducted in accordance with 45CSR2 Appendix "Compliance Test Procedures for 45CSR2" or other equivalent EPA approved method approved by the Director.

Testing requirement	Method
5.3.11.1. Select sampling ports location and the number of traverse points.	Method 1 in appendix A to 40 CFR part 60.
5.3.11.2. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G in appendix A to 40 CFR part 60.
5.3.11.3. Determine oxygen and carbon dioxide concentrations of the stack gas.	Method 3A or 3B in appendix A to 40 CFR part 60.
5.3.11.4. Measure the moisture content of the stack gas.	Method 4 in appendix A to CFR part 60.
5.3.11.5. Measure the particulate matter emission concentration.	Method 5 or 17 (positive pressure fabric filters must use Method 5D) in appendix A to 40 CFR part 60.
5.3.11.6. Convert emissions concentration to lb per MMBTU emission rates	Method 19 F-factor methodology in appendix A to 40 CFR part 60.

Mercury (Hg)

5.3.12. The permittee shall conduct the initial Hg performance test for the coal fired boilers and the annual performance tests shall be conducted according to the methods listed below.

Testing requirement	Method
5.3.12.1. Select the sampling ports location and the number of traverse points.	Method 1 in appendix A to 40 CFR part 60.
5.3.12.2. Determine velocity and volumetric flow-rate of the stack gas.	Method 2, 2F, or 2G in appendix A to 40 CFR part 60.
5.3.12.3. Determine oxygen and carbon dioxide concentrations of the stack gas.	Method 3A or 3B in appendix A to 40 CFR part 60.
5.3.12.4. Measure the moisture content of the stack gas.	Method 4 in appendix A to CFR part 60.
5.3.12.5.. Measure the mercury emission concentration	Method 29 in appendix A to 40 CFR part 60 or Method 101A in appendix B to 40 CFR part 61, or ASTM Method D6784-02 or Mehod 30A or Method 30B.
5.3.12.6. Convert emissions concentration to lb per MMBTU emission rates.	Method 19 F-factor methodology in appendix A to 40 CFR part 60.

5.3.13. The permittee shall establish the minimum sorbent injection rate for each sorbent as the operating limit during the three-run performance test.

5.3.14. The permittee shall establish the corresponding mercury fuel input level during the initial performance testing using the procedures:

5.3.14.1. During the compliance demonstration for mercury, determine the fraction of total heat input (Q_i) and the average mercury concentration (HG_i) of the bituminous coal.

5.3.14.2. Establish a corresponding mercury input level using the Equation:

$$Mercury\ input = \sum (HGi \times Qi)$$

Where:

Mercury input = Corresponding amount of mercury entering the boiler through fuels burned in units of pounds per million BTU.
HGi = Arithmetic average concentration of mercury in fuel type, I, analyzed according to Coal analysis section in units of pounds per million BTU.
Qi = Fraction of total heat input from fuel type. Insert a value of "1" for Q because only one type of fuel.

HCl compliance alternative

5.3.15. The permittee shall conduct HAP emissions tests and fuel analysis for every coal fired boiler emission point according to the requirements below in order to reaffirm the eligibility demonstration:

5.3.15.1. The emission points shall be testing for both HCl and Cl_2. When conducting fuel analysis, it must be assumed that any chlorine detected will be emitted as Cl_2.

5.3.15.2. The permittee shall not conduct emissions tests during periods of startup, shutdown, or malfunction, as specified in §63.7(e)(1);

5.3.15.3. The permittee must test under worst-case operating conditions. The worst-case operating conditions shall be described in the performance test report for the process and control systems and explain why the conditions are worst case;

5.3.15.4. The permittee shall conduct three separate test runs for each test required in this section 5.3.15, as specified in §63.7(e)(3). Each test run shall last at least 1 hour.

5.3.15.5. Sampling sites shall be located at the outlet of the control device and prior to any releases to the atmosphere;

5.3.15.6. During the emissions test, operating parameter monitoring system data shall be collected at least every 15 minutes during the entire emissions test and establish the site-specific operating requirements using data from the monitoring system and specified procedures;

5.3.15.7. The permittee may treat emissions of an individual HAP as zero if all of the test runs resulted in a non-detect measurement. Otherwise, non-detect data for individual HAP must be treated as one-half of the method detection limit.

5.3.16. The permittee shall conduct eligibility demonstrations according to the methods listed below:

Testing requirement	Method
5.3.16.1. Select the sampling ports location and the number of traverse points.	Method 1 in appendix A to 40 CFR part 60.
5.3.16.2. Determine velocity and volumetric flow-rate of the stack gas.	Method 2, 2F, or 2G in appendix A to 40 CFR part 60.
5.3.16.3. Conduct gas molecular weight analysis	Method 3A or 3B in appendix A to 40 CFR part 60.
5.3.16.4. Measure the moisture content of the stack gas.	Method 4 in appendix A to CFR part 60.
5.3.16.5.. Measure the hydrogen chloride and chlorine emission concentrations	Method 26 or 26A in appendix A to 40 CFR part 60.
5.3.16.6. Convert emissions concentration to lb per MMBTU emission rates.	Method 19 F-factor methodology in appendix A to 40 CFR part 60.

5.3.17. The maximum hourly emission rate for each emission point emitting HCl or Cl2 from a coal fired boiler shall be determined from the equation below:

$$E_{i,s} = \sum_{j=1}^{t} (R_{i,j} \times I_j)$$

where:

Ei,s = maximum hourly emission rate for HAP I at each emission point(s) from coal fired boilers P02, P03, P04, P05, or P06.

i= applicable HAP, where i = (HCl or Cl_2) s = individual emission point

j = each emission unit associated with an emission point, s

t = total number of emission units associated with an emission point s

$R_{i,j}$ = emission rate (the 3-run average as determined according to section 5.3.16 of this permit or the pollutant concentration in the fuel samples) for HAP i at emission unit j associated with emission point s, lb per million BTU.

I_j = maximum rated heat input capacity of each unit j emitting HAP I associated with emission point s, million BTU per hour.

5.3.18. To determine eligibility for the health-based compliance alternatives, the permittee shall:

5.3.18.1. Determine the HAP emissions from each appropriate emission point;

5.3.18.2. Demonstrate that the facility is eligible for either of the health-based compliance alternatives using the methods described in Appendix A (HBCA site specific compliance demonstration);

5.3.18.3. The facility is eligible for the health-based compliance alternative for HCl if either statement (1) or (2) is true and if statement (3) is true:

(1) The calculated HCl-equivalent emission rate is below the appropriate value in the look-up table;

(2) The site-specific compliance demonstration indicates that none of the HI values for HCl and Cl2 are greater than 1.0 at locations where people live or congregate (e.g. schools, daycare centers, etc.).

(3) Site modeling for complex terrain was conducted and approved by the Director.

5.4. Recordkeeping Requirements

5.4.1. **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.

5.4.2. **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.

5.4.3. **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.

5.4.4. The permittee shall meet the recordkeeping requirements of §63.10 of Subpart A to the National Emission Standards for Hazardous Air Pollutants for Source Categories including but not limited to §63.10(a), (b)(1), (b)(2)(i)-(iii), (b)(2)(vi)-(xiv), (c), (d)(1)-(2), (e), and (f). The permittee shall also meet §63.10(b)(iv)-(v) and (d)(3)-(5).

5.4.5. Records of the block 2-hour COMS opacity averages and corrective actions taken during excursions shall be maintained on site.

5.4.6. Records of the boiler operating schedule shall be maintained.

5.4.7. Records of the quantity of coal consumed in each boiler on a daily basis shall be maintained.

5.4.8. Records of the coal quality shall be maintained as follows:

	Analysis	Frequency
a.	Ash	Daily
b.	BTU	Daily
c.	Sulfur Content	Daily
d.	Mercury Content with moisture, S and BTU	Monthly composite
e.	Chlorine Content	Monthly composite

5.4.9. Records of COMS data and each Method 9 evaluation conducted shall be maintained for a period of at least five (5) years. The visible emission observation records shall include, but not be limited to, the date, time, name of the emission unit, the applicable visible emission requirements, the results of the observations, what action(s) if any, was/were taken, and the name of the observer.

5.4.10. Records of 3-hour block average sorbent injection rates, boiler steam output, and calculated boiler Hg emissions averaging will be maintained for a period of at least five (5) years.

5.4.11. Records shall be maintained for at least five (5) years for all required monitoring and support information. Records shall be kept on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. Records must be in a form suitable and readily available for expeditious review.

5.4.12. A copy of each notification and report that was submitted to demonstrate compliance with the case-by-case boiler MACT, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that was submitted shall be maintained.

5.4.13. Records of performance stack tests, fuel analyses, or other compliance demonstrations, performance evaluations, and opacity observations as required in §63.10(b)(2)(viii) shall be maintained.

5.4.14. For each CEMS, CPMS, and COMS, the permittee shall keep records according to:

5.4.14.1. Records described in §63.10(b)(2)(vi) through (xi);
5.4.14.2. Monitoring data for continuous opacity monitoring system during a performance evaluation as required in §63.6(h)(7)(i) and (ii);
5.4.14.3. Previous (superseded) versions of the performance evaluation plan as required in §63.8(d)(3);
5.4.14.4. Request for alternatives to relative accuracy test for CEMS as required in §63.8(f)(6)(i);
5.4.14.5. Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

5.4.15. To demonstrate compliance with each applicable emission limit and operating limit, the permittee shall keep the required records including records of all monitoring data and calculated averages for applicable operating limits for opacity, the sorbent injection system, and bituminous coal pollutant content.

5.4.16. For each boiler or process heater subject to an emission limit, the permittee must keep the following records:

5.4.16.1. Records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used;

5.4.16.2. If the permittee combusts non-hazardous secondary materials that have been determined not to be a solid waste pursuant to 40 CFR 41.3(b)(1), the permittee shall keep a record which documents how the secondary material meets each of the legitimacy criteria. If the permittee combusts a fuel that has been processed from a discarded non-hazardous secondary material pursuant to 40 CFR 241,3(b)(2), the permittee shall keep records as to how the operations that produced the fuel satisfy the definition of processing in 40 CFR 241.2. If the fuel received a non-waste determination pursuant to the petition process, 40 CFR241.2, the permittee shall keep a record which documents how the fuel satisfies the requirements of the petition process;

5.4.16.3. A copy of all calculations and supporting documentation of hydrogen chloride and chlorine fuel input that were done to demonstrate continuous compliance with the hydrogen chloride compliance alternative section of the Testing Requirements (5.3) of this permit.

5.4.16.4. A copy of all calculations and supporting documentation of corresponding mercury fuel input, using the equation(s) that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing.

5.4.16.5. If stack tests are performed less than annually, the permittee must keep annual records that document that the emissions in the previous stack test(s) were less than 90 percent of the applicable emission limit, and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase with the past year.

5.4.16.6. The permittee shall maintain and make available for inspection applicable records, logs, reports and/or notifications pertaining to startup and shutdown events for at least 5 years. At a minimum, the most recent 2 years shall be retained on site, while the remaining 3 years of data may be kept and an off-site storage location. The SS records may be maintained on microfilm, electronic storage medium, microfiche or hard copy.

5.4.17. All coal fired boiler malfunctions shall be recorded. The record shall include at a minimum the date, time, and duration of malfunction, the maximum opacity observed during the excursion, the cause of the excursion, and the corrective action(s) taken.

5.4.18. The permittee shall maintain records of the information used in developing the HBCA eligibility demonstration for the coal fired boilers P02, P03, P04, P05, and P06, including all of the information specified below:

5.4.18.1. The health-based eligibility demonstration shall contain, at a minimum:

a. Identification of each appropriate emission point at the affected source facility, including the maximum rated capacity of each appropriate emission point;
b. Stack parameters for each appropriate emission point including, but not limited to: (i) emission release type; (iii) stack height, stack area, stack gas temperature, and stack gas exit velocity; (iii) plot plan showing all emission points, nearby residences, and fenceline; and (iv) identification of any control devices used to reduce emissions from each appropriate emission point.

c. Emission test reports for each pollutant and appropriate emission point which has been tested using the test methods specified in section 5.3.17., including a description of the process parameters identified as being worst case. Fuel analyses for each fuel and emission point which has been conducted including collection and analytical methods used;
d. Identification of the RfC values used in the look-up table analysis or site-specific compliance demonstration;
e. Calculations used to determine the HCl equivalent rates according to the Testing Requirements, Section 5.3 of this permit.
f. Identification of the controlling process factors (including but not limited to, fuel type, heat input rate, type of control devices, process parameters reflecting the emissions rate used for the eligibility demonstration) that become Federally enforceable permit conditions used to show that the facility remains eligible for the health-based compliance alternatives.

5.4.18.2. The eligibility records demonstrated with the site-specific compliance demonstration shall contain at a minimum:

a. Identification of the risk assessment methodology used;
b. Documentation of the fate and transport model used;
c. Documentation of the fate and transport model inputs, including the information described in paragraphs 5.4.18.1(a) through (e) converted to the dimensions required for the model and all of the following that apply: meteorological data; building, land use, and terrain data; receptor locations and population data; and other facility-specific parameters input into the model;
d. Documentation of the fate and transport model outputs;
e. Documentation of any exposure assessment and risk characterization calculations;
f. Comparison of the HQ (Hazard Quotient) HI to the limit of 1.0.

5.4.18.3. Record of combined permit application for R13-2838 and significant modification to R30 107-00001-2003 Part 10 of 14 that include the parameters that defined that the coal fired boilers as eligible for the health-based compliance alternatives to be incorporated into the Title V permit as federally enforceable limits. These parameters include, but are not limited to, fuel type, fuel mix (annual average), emission rate, type of control devices, process parameters (e.g. maximum heat input), and non-process parameters (e.g., stack height). This requirement includes any future revisions to the referenced permits.

5.4.19. The permittee shall maintain and make available for inspection applicable records, logs, reports and/or notifications pertaining to malfunction events for at least 5 years. At a minimum, the most recent 2 years shall be retained on site, while the remaining 3 years of data may be kept and an off-site storage location. The malfunction records may be maintained on microfilm, electronic storage medium, microfiche or hard copy.

5.5. Reporting Requirements

5.5.1. The permittee shall meet all applicable notification requirements of §63.9 of Subpart A to the National Emission Standards for Hazardous Air Pollutants for Source Categories.

5.5.2. The permittee shall meet all applicable reporting requirements of §63.10 of Subpart A to the National Emission Standards for Hazardous Air Pollutants for Source Categories.

5.5.3. The permittee shall submit the performance testing notifications required by §63.7(b) and (c).

5.5.4. The permittee shall submit a Notification of Intent to conduct a performance test at least 30 days before the performance test is scheduled to begin.

5.5.5. The permittee shall report the results of performance tests (stack test and fuel analyses) within 60 days after the completion of the performance tests. This report must also verify that the operating limits for the affected source have not changed or provide documentation of revised operating parameters established.

5.5.6. The permittee shall submit the monitoring notifications required by §63.8(e), (f)(4) and (f)(6).

5.5.7. The permittee shall meet the notification requirements of §63.9 (b) through (h), the General Provisions section of MACT.

5.5.7.1. For each initial compliance demonstration, the permittee shall submit The Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of the performance test and/or other initial compliance demonstrations. The Notification of Compliance Status report must contain all the information specified below, as applicable.

a. A description of the affected source(s) including identification of which subcategory the source is in, the design capacity of the source, a description of the add-on controls used on the source, description of the fuel(s) burned, including whether the fuel(s) were determined by you or EPA through a petition process to be a non-waste under 40 CFR 241.3, whether the fuel(s) were processed from discarded non-hazardous secondary materials within the meaning of 40 CFR 241.3, and justification for the selection of fuel(s) burned during the performance test;

b. Summary of the results of all performance tests (stack tests and fuel analyses) and calculations conducted to demonstrate initial compliance including all established operating limits;

c. A summary of the CO emissions monitoring data and the maximum CO emission levels recorded during the performance test to show that you have met any applicable emission standard in this permit;

d. Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance stack testing or fuel analysis;

e. Identification of whether you plan to demonstrate compliance by emissions averaging;

f. A signed certification that the permittee has met all applicable emission limits and work practice standards;

g. If the permittee had a deviation from any emission limit, work practice standard, or operating limit, the permittee must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.

5.5.8. Exception reporting for the COMS will comply with 45CSR2A-7.2.b. To the extent that an excursion is due to a malfunction, the reporting requirements of 45CSR2A-7.2.d shall be followed.

5.5.9. For all coal-fired boilers, if excess particulate emissions or excess opacity result due to a malfunction, notification shall be made per 45CSR2.

5.5.10. Exceedance of an applicable emission limit not consistent with the startup, shutdown and malfunction plan will be reported by fax, email or telephone within two (2) days of becoming aware of the condition. A subsequent certified written report concerning the malfunction with the Director within thirty (30) days providing the information in 40 CFR 63.10(d)(5)(ii).

5.5.11. A compliance report shall be submitted semiannually.

5.5.11.1. The first compliance report must cover the period beginning on the compliance data that is specified for your affected source and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the specified compliance date.

5.5.11.2. The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the specified compliance date.

5.5.11.3. Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

5.5.11.4. Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

5.5.11.5. For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR60.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), the permittee may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of the dates in this section.

5.5.12. The compliance report must contain the following information:

5.5.12.1. Company name and address;
5.5.12.2. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;
5.5.12.3. Date of report and beginning and ending dates of the reporting period;
5.5.12.4. The total fuel use by each affected source subject to an emission limit, for each calendar month within the semiannual reporting period, including but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by EPA or the basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure;
5.5.12.5. A summary of the results of the annual performance tests and documentation of any operating limits that were reestablished during this test, if applicable. If the stack test is being conducted once every three years, the date of the last three stack tests, a comparison of the emission level achieved in the last three stack tests to the 90 percent emission limit threshold, and a statement as to whether there have been any operational changes since the last stack test that could increase emissions;
5.5.12.6. A signed statement indicating that no new types of fuel were burned.
5.5.12.7. If there are no deviations from any emission limits or operating limits, a statement that there were no deviations from the emission limits or operating limits during the reporting period.
5.5.12.8. If there were no deviations from the monitoring requirements including no periods during which the CMSs were out of control as specified in §63.8(c)(7), a statement

that there were no deviations and no periods during which the CMS were out of control during the reporting period.

5.5.12.9. If there was a startup, shutdown, or malfunction during the reporting period and actions were taken consistent with the startup, shutdown, and malfunction plan, the compliance report shall include the information in §63.10.(d)(5)(i).

5.5.13. For each deviation from an emission limit or operating limit that occurs at an affected source where a CMS is not being used to comply with that emission limit or operating limit, the compliance report must additionally contain the following information:

5.5.13.1. The total operating time of each affected source during the reporting period;
5.5.13.2. A description of the deviation and which emission limit or operating limit that was deviated;
5.5.13.3. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.
5.5.13.4. A copy of the test report if the annual performance test showed a deviation from the emission limits.

5.5.14. For each deviation from an emission limit, operating limit, and monitoring requirement occurring at an affected source where a CMS is being used to comply with that emission limit, or operating limit, the information listed below must be included. This includes any deviations from the site-specific monitoring plan.

5.5.14.1. The date and time that each deviation started and stopped and description of the nature of the deviation (i.e. what was deviated from);
5.5.14.2. The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks;
5.5.14.3. The date, time, and duration that each CMS was out of control, including the information is §63.8 (Subpart A, Monitoring requirements);
5.5.14.4. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period;
5.5.14.5. A summary of the total duration of the deviation during the reporting period and of the total source operating time during that reporting period;
5.5.14.6. An analysis of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes;
5.5.14.7. A summary of the total duration of CMSs downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period;
5.5.14.8. An identification of each parameter that was monitored at the affected source for which there was a deviation;
5.5.14.9. A brief description of the source for which there was a deviation;
5.5.14.10. A brief description of each CMS for which there was a deviation;
5.5.14.11. The date of the latest CMS certification or audit for the system for which there was a deviation;
5.5.14.12. A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

5.5.15. The permittee shall report all deviations in the semiannual monitoring report.

5.5.16. A quarterly monitoring summary report shall be prepared for the coal fired boilers shall include:

5.5.16.1. Total number of hours operated
5.5.16.2. Total time in startup, shutdown, and malfunction
5.5.16.3. Duration of excess emissions

5.5.16.4. Date and time of startup, shutdown, and malfunction of each boiler
5.5.16.5. Calculated amount of coal consumed on a daily basis
5.5.16.6. Ash and BTU content for each coal shipment

5.5.17. The excursion and monitoring plan performance report shall include:

5.5.17.1. The magnitude of each excursion
5.5.17.2. Date and time of each excursion including starting and ending times
5.5.17.3. Specific identification of each excursion that occurs during startup, shutdowns, or malfunctions
5.5.17.4. Cause of any excursion
5.5.17.5. Corrective actions taken
5.5.17.6. Preventative measures adopted
5.5.17.7. When data is unavailable, the date and time for each period, reason for the unavailability, and corrective actions taken.

5.5.18. If the total number of excursions for the reporting period are less than one percent (1%) of the total number of hours for the reporting period, the Monitoring Summary Report is submitted to the Director for that quarter; the Excursion and Monitoring Plan Performance Report is retained on site and shall be submitted to the Director upon request [45 CSR 2A – 7.2.c.1]

5.5.19. If the number of excursion for the reporting period is one percent (1%) or greater, the Monitoring Summary Report and the Excursion and Monitoring Plan Performance Report shall both be submitted to the Director for that quarter. [45CSR2A-7.2.c.2]

5.5.20. The permittee shall provide all of the required information for the deviation report in their semiannual monitoring report. The permittee may provide the required deviation information in a compliance report; however, submission of a compliance report does not otherwise affect any obligation the permittee may have to report deviations from permit requirements to the permit authority.

5.5.21. In addition to the information required in §63.9 (h)(2) (Subpart A, Notification requirements), the notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

5.5.21.1. "This facility has implemented an energy efficiency plan as required by Section 5.1.6 of this permit and the energy plan is applicable to the facility;"
5.5.21.2. "No secondary materials that are solid waste were intentionally combusted in any affected unit".

5.5.22. After December 31, 2012, within 120 days after the date of completing each performance evaluation conducted to demonstrate compliance with the case-by-case boiler MACT, the permittee must submit the test data to EPA by entering the data electronically into EPA's WebFIRE data base through EPA;s Central Data Exchange. The permittee shall enter the test data into EPA's data base using the Electronic Reporting Tool or other compatible electronic spreadsheet. Only performance evaluation data collected using methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

5.5.23. Routing reports required to be submitted to the Director must be postmarked by the 30th day following the end of each calendar quarter.

APPENDIX A

HBCA Site-Specific Compliance Demonstration

For changes to the HCl equivalent emission standard, the permittee shall perform a site-specific compliance demonstration for the facility. The permittee may use any scientifically-accepted peer-reviewed risk assessment methodology for the site-specific compliance demonstration.

(1) The facility is eligible for the HCl alternative compliance option if the site-specific compliance demonstrates that the maximum HI for HCl and Cl2 is less than or equal to 1.0.

(2) At a minimum, the site-specific compliance demonstration must:

a. Estimate long-term inhalation exposures through the estimation of annual or multi-year average ambient concentrations;
b. Estimate the inhalation exposure for the individual most exposed to the facility's emissions;
c. Use site-specific, quality-assured data wherever possible;
d. Use health-protective default assumptions wherever site-specific data are not available, and;
e. Contain adequate documentation of the data and methods used for the assessment so that it is transparent and can be reproduced by an experienced risk assessor and emissions measurement expert.

(3) The site-specific compliance demonstration need not:

a. Assume any attenuation of exposure concentrations due to the penetration of outdoor pollutants into indoor exposure areas;
b. Assume any reaction or deposition of the emitted pollutants during transport from the emission point to the point of exposure.

APPENDIX B
Sorbent Injection System Start-up Schedule

The permittee shall meet the sorbent injection system milestones by the time-frame indicated in the schedule below. The permittee shall provide written updates on a monthly basis until the schedule has been completed. The progress communication shall be sent within five working days following the new month and shall follow the format of the schedule below.

Item #	Timing (Month #) Following Permit Effectiveness Date	Milestone	Status*	Comments*
			Permit Effectiveness Date: _____	
1	Month 1	Initial mechanical checks for sorbent system (example: safety checks, process hazards review, cleaning, scoping, reliability maintenance testing)		
2	Month 2	Mechanical checks continued. Inventory system for sorbent injection operation.		
3	Month 3	Mechanical checks completed on the sorbent injection system		
4	Month 4	Emissions averaging implementation plan, including sorbent injection control methodology submitted to DAQ for written approval		
5	Month 5	Sorbent injection controls system testing		
6	Month 6	Sorbent injection software and hardware controls functional		
7	Month 7	Administrative controls functional (example: operating instructions, operator training, maintenance procedures). Sorbent injection system is operational.		
8	Month 8	Performance testing of one (1) boiler. Operate all boilers with sorbent injection system at established injection rate limits per performance testing or 0.1 Ca/S ratio.		
9	Month 9	Performance testing of two additional boilers (2). Operate all boilers with sorbent injection system at established injection rate limits per performance testing or 0.1 Ca/S ratio.		
10	Month 10	Performance testing of final two (2) boilers. Operate all boilers with sorbent injection system at established injection rate limits per performance testing or 0.1 Ca/S ratio.		
11	Month 11	Operate all boilers with sorbent injection system at established injection rate limits per performance testing.		
12	Month 12	All boiler sorbent performance tests completed; all boiler sorbent injection rates established.		

Note: * For monthly progress communication

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.

Signature[1] _____ _____
(please use blue ink) Responsible Official or Authorized Representative Date

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

Telephone No. _____ Fax No. _____

[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 U.S. EPA); or

d. The designated representative delegated with such authority and approved in advance by the Director.