ALLEGHENY COUNTY HEALTH DEPARTMENT

AIR QUALITY PROGRAM
301 39th Street, Bldg. #7
Pittsburgh, PA 15201-1891

Major Source Operating Permit

Issued To: NRG Power Midwest LP
Facility: Cheswick Generating Station
Pittsburgh & Porter Streets
Springdale, PA 15144

ACHD Permit #: 0054r
Date of Issuance: November 21, 2017
Expiration Date: November 21, 2022
Renewal Date: May 21, 2022

Issued By: JoAnn Truchan, P.E.
Section Chief, Engineering

Prepared By: David D. Good
Air Quality Engineer
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<th>Date</th>
<th>Section/Changes</th>
</tr>
</thead>
</table>
CONTACT INFORMATION

Facility Location: Cheswick Generating Station
Pittsburgh & Porter Street
Springdale, PA 15144

Permittee/Owner: NRG Power Midwest LP
Cheswick Generating Station
P.O. Box 65
Cheswick, PA 15024

Responsible Official: Kevin P. Panzino
Title: Plant Manager
Company: NRG Energy, Inc.
Address: Cheswick Generating Station
P.O. Box 65
Cheswick, PA 15024

Telephone Number: 724-275-1401
E-Mail Address: Kevin.Panzino@nrge.com

Facility Contact: Jill M. Buckley
Title: Environmental Specialist
Telephone Number: 724-275-1409
E-mail Address: Jill.Buckley@nrge.com

AGENCY ADDRESSES:

ACHD Engineer: David D. Good
Title: Air Quality Engineer
Telephone Number: 412-578-8366
Fax Number: 412-578-8144
E-mail Address: David.Good@alleghenycounty.us

ACHD Contact: Allegheny County Health Department
Air Quality Program
301 39th Street, Building #7
Pittsburgh, PA 15201-1891

EPA Contact: Enforcement Programs Section (3AP12)
USEPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029
FACILITY DESCRIPTION

The Cheswick Generating Station is an electric generating facility located on Pittsburgh and Porter Streets in Springdale, PA. The plant is composed of one main boiler exhausting to one stack, which fires coal or synfuel as the primary fuel and natural gas as an auxiliary fuel for startup, shutdown, and at the operators’ discretion. Pollution control equipment for the main boiler includes low NOx burners with separated overfire air, electrostatic precipitation with flue gas conditioning, selective catalytic reduction, and Flue Gas Desulfurization (FGD). The plant also has a No. 2 oil fired auxiliary boiler which exhausts to a separate stack. The facility is a major source of sulfur dioxide (SO2), nitrogen oxides (NOx), particulate matter (PM), particulate matter less than 10 microns in diameter (PM-10), particulate matter less than 2.5 microns in diameter (PM-2.5), carbon monoxide emissions (CO), volatile organic compounds (VOCs), and hazardous air pollutants (HAPs); as defined in of Article XXI § 2101.20. The facility is also subject to the acid rain regulations. The emission units regulated by this permit are summarized in Table II-1:

<table>
<thead>
<tr>
<th>STACK I.D.</th>
<th>SOURCE DESCRIPTION</th>
<th>CONTROL DEVICE(S)</th>
<th>MAXIMUM CAPACITY</th>
<th>FUEL/RAW MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-001</td>
<td>Main Boiler No. 1, Tangentially Fired</td>
<td>Low NOx Burners; ESP with Flue Gas Conditioning; SCR</td>
<td>5,500 MMBtu/hr Rated Annual; 6,000 MMBtu/hr Maximum</td>
<td>Bituminous and Sub-Bituminous Coal; Synfuel; Natural Gas (Auxiliary Fuel)</td>
</tr>
<tr>
<td>S-002</td>
<td>Auxiliary Boiler, No. 2 Fuel Oil Stoker Fired</td>
<td>None</td>
<td>160 MMBtu/Hr</td>
<td>No. 2 Fuel Oil</td>
</tr>
<tr>
<td>N/A</td>
<td>Ammonia Storage Tanks (4 Tanks)</td>
<td>Vapor Recovery/ Bottom Loading</td>
<td>42,000 gallons Each Tank</td>
<td>Aqueous Ammonia (19%)</td>
</tr>
<tr>
<td>N/A</td>
<td>Coal Handling and Storage</td>
<td>Fugitive Dust Control Measures</td>
<td>Unloading 1800 tons/hr; Conveying 600 tons/hr</td>
<td>Bituminous and Sub-Bituminous Coal; Synfuel</td>
</tr>
<tr>
<td>N/A</td>
<td>Ash Handling, Processing, and Storage</td>
<td>Fabric Filters; Wet Suppression</td>
<td>151,110 tons/yr (Fly Ash) 70,000 tons/yr (Bottom Ash)</td>
<td>Fly Ash; Bottom Ash</td>
</tr>
<tr>
<td>N/A</td>
<td>Plant Roads</td>
<td>Wet Suppression; Chemical Treatment; Traffic Speed Control</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>N/A</td>
<td>Limestone Handling</td>
<td>Fugitive Dust Controls, Minimum Moisture Content &amp; Maximum Silt Content</td>
<td>392,214 Tons Limestone/yr</td>
<td>Limestone</td>
</tr>
<tr>
<td>N/A</td>
<td>Gypsum Handling</td>
<td>Fugitive Dust Controls</td>
<td>576,351 Tons Gypsum/yr</td>
<td>Gypsum</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Limestone Day Silos A and B</td>
<td>Baghouse – Each Silo</td>
<td>1 Day FGD Limestone Throughput</td>
<td>Limestone</td>
</tr>
<tr>
<td>STACK I.D.</td>
<td>SOURCE DESCRIPTION</td>
<td>CONTROL DEVICE(S)</td>
<td>MAXIMUM CAPACITY</td>
<td>FUEL/RAW MATERIAL</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------------------------------------------------</td>
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<td>----------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>N/A</td>
<td>Station Cooling Water Cooling Tower (3 Cells)</td>
<td>Mist Eliminator</td>
<td>13,000 gallons per minute</td>
<td>Make-up Water</td>
</tr>
<tr>
<td>N/A</td>
<td>Air Compressors</td>
<td>None</td>
<td>465 Hp (each)</td>
<td>Diesel Fuel</td>
</tr>
<tr>
<td>N/A</td>
<td>Facility Space Heaters</td>
<td>None</td>
<td>3.25 MMBtu/Hr - combined</td>
<td>No. 1 or No. 2 Fuel Oil</td>
</tr>
<tr>
<td>N/A</td>
<td>Storage Tank</td>
<td>None</td>
<td>150,000 gallons</td>
<td>No. 2 Fuel Oil</td>
</tr>
</tbody>
</table>
Cheswick
Block schematic of Unit No.1 and associated emission control devices

Process Flow Diagram:
DECLARATION OF POLICY

Pollution prevention is recognized as the preferred strategy (over pollution control) for reducing risk to air resources. Accordingly, pollution prevention measures should be integrated into air pollution control programs wherever possible, and the adoption by sources of cost-effective compliance strategies, incorporating pollution prevention, is encouraged. The Department will give expedited consideration to any permit modification request based on pollution prevention principles.

The permittee is subject to the terms and conditions set forth below. These terms and conditions constitute provisions of Allegheny County Health Department Rules and Regulations, Article XXI Air Pollution Control. The subject equipment has been conditionally approved, for operation. The equipment shall be operated in conformity with the plans, specifications, conditions, and instructions which are part of your application, and may be periodically inspected for compliance by the Department. In the event that the terms and conditions of this permit or the applicable provisions of Article XXI conflict with the application for this permit, these terms and conditions and the applicable provisions of Article XXI shall prevail. Additionally, nothing in this permit relieves the permittee from the obligation to comply with all applicable Federal, State and Local laws and regulations.

GENERAL CONDITIONS - Major Source

1. Prohibition of Air Pollution (§2101.11.a)

It shall be a violation of this permit to fail to comply with, or to cause or assist in the violation of, any requirement of this permit, or any order or permit issued pursuant to authority granted by Article XXI. The permittee shall not willfully, negligently, or through the failure to provide and operate necessary control equipment or to take necessary precautions, operate any source of air contaminants in such manner that emissions from such source:

a. Exceed the amounts permitted by this permit or by any order or permit issued pursuant to Article XXI;

b. Cause an exceedance of the ambient air quality standards established by Article XXI §2101.10; or

c. May reasonably be anticipated to endanger the public health, safety, or welfare.

2. Definitions (§2101.20)

a. Except as specifically provided in this permit, terms used retain the meaning accorded them under the applicable provisions and requirements of Article XXI. Whenever used in this permit, or in any action taken pursuant to this permit, the words and phrases shall have the meanings stated, unless the context clearly indicates otherwise.

b. Unless specified otherwise in this permit or in the applicable regulation, the term “year” shall mean any twelve (12) consecutive months.

c. “RACT Order No. 217” shall be defined as Plan Approval Order and Agreement No. 217 Upon Consent, dated March 8, 1996.

d. “Synfuel” shall be defined as the coal and binder used in the production of synfuel. Such binders shall be only Covol 298, Covol 298-1, Nalco 9838, FTH-100, each as a latex binder, or soybean oil or other such binders as approved by the Department.
3. **Conditions (§2102.03.c)**

   It shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02, for any person to fail to comply with any terms or conditions set forth in this permit.

4. **Certification (§2102.01)**

   Any report, or compliance certification submitted under this permit shall contain written certification by a responsible official as to truth, accuracy, and completeness. This certification and any other certification required under this permit shall be signed by a responsible official of the source, and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

5. **Transfers (§2102.03.e, §2103.14.b)**

   This permit shall not be transferable from one person to another, except in accordance with Article XXI §2102.03.e and in cases of change-in-ownership which are documented to the satisfaction of the Department, and shall be valid only for the specific sources and equipment for which this permit was issued. The transfer of permits in the case of change-in-ownership may be made consistent with the administrative permit amendment procedure of Article XXI §2103.14.b. The required documentation and fee must be received by the Department at least 30 days before the intended transfer date.

6. **Term (§2103.12.e, §2103.13.a)**

   a. This permit shall remain valid for five (5) years from the date of issuance, or such other shorter period if required by the Clean Air Act, unless revoked. The terms and conditions of an expired permit shall automatically continue pending issuance of a new operating permit provided the permittee has submitted a timely and complete application and paid applicable fees required under Article XXI Part C, and the Department through no fault of the permittee is unable to issue or deny a new permit before the expiration of the previous permit.

   b. Expiration. Permit expiration terminates the source’s right to operate unless a timely and complete renewal application has been submitted consistent with the requirements of Article XXI Part C.

7. **Need to Halt or Reduce Activity Not a Defense (§2103.12.f.2)**

   It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

8. **Property Rights (§2103.12.f.4)**

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

9. **Duty to Provide Information (§2103.12.f.5, §2101.07.d.4, §2101.07.d.5)**

   a. The permittee shall furnish to the Department in writing within a reasonable time, any information that the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
b. Upon request, the permittee shall also furnish to the Department copies of any records required to be kept by the permit.

c. Upon cause shown by the permittee the records, reports, or information, or a particular portion thereof, claimed by the permittee to be confidential shall be submitted to the Department in accordance with the requirements of Article XXI, §2101.07.d.4. Information submitted to the Department under a claim of confidentiality, shall be available to the US EPA and the PADEP upon request and without restriction. Upon request of the permittee the confidential information may be submitted to the USEPA and PADEP directly. Emission data or any portions of any draft, proposed, or issued permits shall not be considered confidential.

10. **Modification of Section 112(b) Pollutants which are VOCs or PM-10 (§2103.12.f.7)**

Except where precluded under the Clean Air Act or federal regulations promulgated under the Clean Air Act, if this permit limits the emissions of VOCs or PM-10 but does not limit the emissions of any hazardous air pollutants, the mixture of hazardous air pollutants which are VOCs or PM-10 can be modified so long as no permit emission limitations are violated. A log of all mixtures and changes shall be kept and reported to the Department with the next report required after each change.

11. **Right to Access (§2103.12.h.2)**

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized Department and other federal, state, county, and local government representatives to:

a. Enter upon the permittee's premises where a permitted source is located or an emissions-related activity is conducted, or where records are or should be kept under the conditions of the permit;

b. Have access to, copy and remove, at reasonable times, any records that must be kept under the conditions of the permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

d. As authorized by either Article XXI or the Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements.

12. **Certification of Compliance (§2103.12.h.5, §2103.22.i.1)**

a. The permittee shall submit on an annual basis, certification of compliance with all terms and conditions contained in this permit, including emission limitations, standards, or work practices. The certification of compliance shall be made consistent with General Condition 4 above and shall include the following information at a minimum:

1) The identification of each term or condition of the permit that is the basis of the certification;
2) The compliance status;
3) Whether compliance was continuous or intermittent;
4) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with the provisions of this permit; and
5) Such other facts as the Department may require to determine the compliance status of the source.
b. All certifications of compliance must be submitted to the Administrator as well as the Department by March 1 of each year for the time period beginning January 1 and ending December 31 of the previous year. The first report shall be due March 1, 2017 for the time period beginning on the issuance date of this permit through December 31, 2016. Compliance certifications may be emailed to the Administrator at R3_APD_Permits@epa.gov in lieu of mailing a hard copy.

13. Record Keeping Requirements (§2103.12.j.1)

a. The permittee shall maintain records of required monitoring information that include the following:

1) The date, place as defined in the permit, and time of sampling or measurements;
2) The date(s) analyses were performed;
3) The company or entity that performed the analyses;
4) The analytical techniques or methods used;
5) The results of such analyses; and
6) The operating parameters existing at the time of sampling or measurement.

b. The permittee shall maintain and make available to the Department, upon request, records including computerized records that may be necessary to comply with the reporting and emission statements in Article XXI §2108.01.c. Such records may include records of production, fuel usage, maintenance of production or pollution control equipment or other information determined by the Department to be necessary for identification and quantification of potential and actual air contaminant emissions.

14. Retention of Records (§2103.12.j.2)

The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation or equivalent electronic data, and copies of all reports required by this permit.

15. Reporting Requirements (§2103.12.k.)

a. The permittee shall submit reports of any required monitoring at least every six (6) months. For the period January 1 through June 30, the report is due July 30. For the period July 1 through December 31, the report is due January 30. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by the Responsible Official.

b. Prompt reporting of deviations from permit requirements is required, including those attributable to upset conditions as defined in this permit and Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.

c. All reports submitted to the Department shall comply with the certification requirements of General Condition III.4 above.

d. Quarterly reports required by this permit shall be submitted to the Department within 30 days of the end of each calendar quarter.
16. **Severability Requirement** (§2103.12.f)

The provisions of this permit are severable, and if any provision of this permit is determined by a court of competent jurisdiction to be invalid or unenforceable, such a determination will not affect the remaining provisions of this permit.

17. **Existing Source Reactivations** (§2103.13.d)

The permittee shall not reactivate any source that has been out of operation or production for a period of one year or more unless the permittee has submitted a reactivation plan request to, and received a written reactivation plan approval from, the Department. Existing source reactivations shall meet all requirements of Article XXI §2103.13.d.

18. **Administrative Permit Amendment Procedures** (§2103.14.b, §2103.24.b)

An administrative permit amendment may be made consistent with the procedures of Article XXI §2103.14.b and §2103.24.b. Administrative permit amendments are not authorized for any amendment precluded by the Clean Air Act or the regulations thereunder.


Sources may apply for revisions and minor permit modifications on an expedited basis in accordance with Article XXI §2103.14.c and §2103.24.a.

20. **Significant Permit Modifications** (§2103.14.d)

Significant permit modifications shall meet all requirements of the applicable subparts of Article XXI, Part C, including those for applications, fees, public participation, review by affected States, and review by EPA, as they apply to permit issuance and permit renewal. The approval of a significant permit modification, if the entire permit has been reopened for review, shall commence a new full five (5) year permit term. The Department shall take final action on all such permits within nine (9) months following receipt of a complete application.

21. **Duty to Comply** (§2103.12.f.1, §2103.22.g)

The permittee shall comply with all permit conditions and all other applicable requirements at all times. Any permit noncompliance constitutes a violation of the Clean Air Act, the Air Pollution Control Act, and Article XXI and is grounds for any and all enforcement action, including, but not limited to, permit termination, revocation and reissuance, or modification, and denial of a permit renewal application.

22. **Renewals** (§2103.13.b., §2103.23.a)

Renewal of this permit is subject to the same fees and procedural requirements, including those for public participation and affected State and EPA review, that apply to initial permit issuance. The application for renewal shall be submitted at least six (6) months but not more than eighteen (18) months prior to expiration of this permit. The application shall also include submission of a supplemental compliance review as required by Article XXI §2102.01.
23. **Reopenings for Cause (§2103.15, §2103.25.a, §2103.12.f.3)**

   a. This permit shall be reopened and reissued under any of the following circumstances:

      1) Additional requirements under the Clean Air Act become applicable to a major source with a remaining permit term of three (3) or more years. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended solely due to the failure of the Department to act on a permit renewal application in a timely fashion.

      2) Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into this permit.

      3) The Department or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.

      4) The Administrator or the Department determines that this permit must be reissued or revoked to assure compliance with the applicable requirements.

   b. This permit may be modified, revoked, reopened, and reissued; or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in this permit.

24. **Reopenings for Cause by the EPA (§2103.25.b)**

   This permit may be modified, reopened and reissued, revoked or terminated for cause by the EPA in accordance with procedures specified in Article XXI §2103.25.b.

25. **Annual Operating Permit Administration Fee (§2103.40)**

   In each year during the term of this permit, on or before the last day of the month in which the application for this permit was submitted, the permittee shall submit to the Department, in addition to any other applicable administration fees, an Annual Operating Permit Administration Fee in accordance with §2103.40 by check or money order payable to the “Allegheny County Air Pollution Control Fund” in the amount specified in the fee schedule applicable at that time.

26. **Annual Major Source Emissions Fees Requirements (§2103.41)**

   No later than September 1 of each year, the permittee shall pay an annual emission fee in accordance with Article XXI §2103.41 for each ton of a regulated pollutant (except for carbon monoxide) actually emitted from the source. The permittee shall not be required to pay an emission fee for emissions of more than 4,000 tons of each regulated pollutant. The emission fee shall be increased in each year after 1995 by the percentage, if any, by which the Consumer Price Index for the most recent calendar year exceeds the Consumer Price Index for the previous calendar year.
27. **Other Requirements not Affected** (§2104.08, §2105.02, §2105.05)

Compliance with the requirements of this permit shall not in any manner relieve any person from the duty to fully comply with any other applicable Federal, State, or County statute, rule, regulation, or the like, including but not limited to the odor emission standards under Article XXI §2104.04, any applicable NSPSs, NESHAPS, MACTs, or Generally Achievable Control Technology (GACT) standards now or hereafter established by the EPA, and any applicable requirements of BACT or LAER as provided by Article XXI, any condition contained in any applicable Installation or Operating Permit and/or any additional or more stringent requirements contained in an order issued to such person pursuant to Article XXI Part I.

28. **Termination of Operation** (§2108.01.a)

In the event that operation of any source of air contaminants is permanently terminated, the person responsible for such source shall so report, in writing, to the Department within 60 days of such termination.

29. **Emissions Inventory Statements** (§2108.01.e & g)

a. Emissions inventory statements in accordance with Article XXI §2108.01.e shall be submitted to the Department by March 15 of each year for the preceding calendar year. The Department may require more frequent submittals if the Department determines that more frequent submissions are required by the EPA or that analysis of the data on a more frequent basis is necessary to implement the requirements of Article XXI or the Clean Air Act.

b. The failure to submit any report or update within the time specified, the knowing submission of false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

30. **Tests by the Department** (§2108.02.d)

Notwithstanding any tests conducted pursuant to Article XXI §2108.02, the Department or another entity designated by the Department may conduct emissions testing on any source or air pollution control equipment. At the request of the Department, the person responsible for such source or equipment shall provide adequate sampling ports, safe sampling platforms and adequate utilities for the performance of such tests.

31. **Other Rights and Remedies Preserved** (§2109.02.b)

Nothing in this permit shall be construed as impairing any right or remedy now existing or hereafter created in equity, common law or statutory law with respect to air pollution, nor shall any court be deprived of such jurisdiction for the reason that such air pollution constitutes a violation of this permit.

32. **Enforcement and Emergency Orders** (§2109.03, §2109.05)

a. The person responsible for this source shall be subject to any and all enforcement and emergency orders issued to it by the Department in accordance with Article XXI §2109.03, §2109.04 and §2109.05.

b. Upon request, any person aggrieved by an Enforcement Order or Emergency Order shall be granted a hearing as provided by Article XXI §2109.03.d; provided however, that an Emergency Order
shall continue in full force and effect notwithstanding the pendency of any such appeal.

c. Failure to comply with an Enforcement Order or immediately comply with an Emergency Order shall be a violation of this permit thus giving rise to the remedies provided by Article XXI §2109.02.

33. Penalties, Fines, and Interest (§2109.07.a)

A source that fails to pay any fee required under this permit when due shall pay a civil penalty of 50% of the fee amount, plus interest on the fee amount computed in accordance with Article XXI §2109.06.a.4 from the date the fee was required to be paid. In addition, the source may have this permit revoked for failure to pay any fee required.

34. Appeals (§2109.10)

In accordance with State Law and County regulations and ordinances, any person aggrieved by an order or other final action of the Department issued pursuant to Article XXI or any unsuccessful petitioner to the Administrator under Article XXI Part C, Subpart 2, shall have the right to appeal the action to the Director in accordance with the applicable County regulations and ordinances.

35. Risk Management (§2104.08, 40 CFR Part 68)

Should this stationary source, as defined in 40 CFR Part 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in Part 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by General Condition III.12 above.

36. Permit Shield (§2103.22, §2103.14.b.4)

a. The permittee’s compliance with the conditions of this permit shall be deemed compliance with all major source applicable requirements as of the date of permit issuance, provided that:

1) Such major source applicable requirements are included and are specifically identified in the permit; or
2) The Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

b. Nothing in Article XXI §2103.22.e or the Title V Permit shall alter or affect the following:

1) The provisions of Section 303 of the Clean Air Act and the provisions of Article XXI regarding emergency orders, including the authority of the Administrator and the Department under such provisions;
2) The liability of any person who owns, operates, or allows to be operated, a source in violation of any major source applicable requirements prior to or at the time of permit issuance;
3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; or
4) The ability of the EPA or the County to obtain information from the permittee pursuant to Section 114 of the Clean Air Act, the provisions of Article XXI and State law.

c. Unless precluded by the Clean Air Act or regulations therein, final action by the Department on administrative amendments, minor and significant permit modifications, and operational flexibility changes shall be covered by the permit shield provided such amendments, modifications and changes meet the relevant requirements of Article XXI.

d. The permit shield authorized under Article XXI §2103.22 is in effect for the permit terms and conditions as identified in this permit.

37. Circumvention (§2101.14)

For purposes of determining compliance with the provisions of this permit and Article XXI, no credit shall be given to any person for any device or technique, including but not limited to the operation of any source with unnecessary amounts of air, the combining of separate sources except as specifically permitted by Article XXI and the Department, the use of stacks exceeding Good Engineering Practice height as defined by regulations promulgated by the US EPA at 40 CFR §§51.100 and 51.110 and Subpart I, and other dispersion techniques, which without reducing the amount of air contaminants emitted, conceals or dilutes an emission of air contaminants which would otherwise violate the provisions of this Article; except that for purposes of determining compliance with Article §2104.04 concerning odors, credit for such devices or techniques, except for the use of a masking agent, may be given.

38. Duty to Supplement and Correct Relevant Facts (§2103.11.d.2)

a. The permittee shall provide additional information as necessary to address requirements that become applicable to the source after the date it files a complete application but prior to the Department taking action on the permit application.

b. The permittee shall provide supplementary fact or corrected information upon becoming aware that incorrect information has been submitted or relevant facts were not submitted.

c. Except as otherwise required by this permit and Article XXI, the Clean Air Act, or the regulations thereunder, the permittee shall submit additional information as necessary to address changes occurring at the source after the date it files a complete application but prior to the Department taking action on the permit application.

d. The applicant shall submit information requested by the Department which is reasonably necessary to evaluate the permit application.

39. Effect (§2102.03.g.)

Except as specifically otherwise provided under Article XXI, Part C, issuance of a permit pursuant to Article XXI Part B or Part C shall not in any manner relieve any person of the duty to fully comply with the requirements of this permit. Article XXI or any other provision of law, nor shall it in any manner preclude or affect the right of the Department to initiate any enforcement action whatsoever for violations of this permit or Article XXI, whether occurring before or after the issuance of such permit. Further, except as specifically otherwise provided under Article XXI Part C the issuance of a permit shall not be a defense to any nuisance action, nor shall such permit be construed as a certificate of compliance with the requirements of this permit or Article XXI.
40. Installation Permits (§2102.04.a.1.)

It shall be a violation of Article XXI giving rise to the remedies set forth in Article XXI Part I for any person to install, modify, replace, reconstruct, or reactivate any source or air pollution control equipment which would require an installation permit or permit modification in accordance with Article XXI Part B or Part C applies unless:

1. The Department has first issued an Installation Permit for such source or equipment; or
2. Such action is solely a reactivation of a source with a current Operating Permit which is approved under §2103.13 of this Article; or
3. Such source is exempt under Article XXI §2102.04.a.5.

"PERMIT SHIELD" IN EFFECT.
SITE LEVEL TERMS AND CONDITIONS

1. Reporting of Upset Conditions (§2103.12.k.2)

The permittee shall promptly report all deviations from permit requirements, including those attributable to upset conditions as defined in Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.

2. Visible Emissions (§2104.01.a)

Except as provided for by Article XXI §2108.01.d pertaining to a cold start, no person shall operate, or allow to be operated, any source in such manner that the opacity of visible emissions from a flue or process fugitive emissions from such source, excluding uncombined water:

a. Equal or exceed an opacity of 20% for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period; or,

b. Equal or exceed an opacity of 60% at any time.

3. Odor Emissions (§2104.04) (County-only enforceable)

No person shall operate, or allow to be operated, any source in such manner that emissions of malodorous matter from such source are perceptible beyond the property line.

4. Materials Handling (§2104.05)

The permittee shall not conduct, or allow to be conducted, any materials handling operation in such manner that emissions from such operation are visible at or beyond the property line.

5. Operation and Maintenance (§2105.03)

All air pollution control equipment required by this permit or any order under Article XXI, and all equivalent compliance techniques approved by the Department, shall be properly installed, maintained, and operated consistently with good air pollution control practice.

6. Open Burning (§2105.50)

No person shall conduct, or allow to be conducted, the open burning of any material, except where the Department has issued an Open Burning Permit to such person in accordance with Article XXI §2105.50 or where the open burning is conducted solely for the purpose of non-commercial preparation of food for human consumption, recreation, light, ornament, or provision of warmth for outside workers, and in a manner which contributes a negligible amount of air contaminants.
7. Shutdown of Control Equipment (§2108.01.b)

a. In the event any air pollution control equipment is shut down for reasons other than a breakdown, the person responsible for such equipment shall report, in writing, to the Department the intent to shut down such equipment at least 24 hours prior to the planned shutdown. Notwithstanding the submission of such report, the equipment shall not be shut down until the approval of the Department is obtained; provided, however, that no such report shall be required if the source(s) served by such air pollution control equipment is also shut down at all times that such equipment is shut down.

b. The Department shall act on all requested shutdowns as promptly as possible. If the Department does not take action on such requests within ten (10) calendar days of receipt of the notice, the request shall be deemed denied, and upon request, the owner or operator of the affected source shall have a right to appeal in accordance with the provisions of Article XI.

c. The prior report required by Site Level Condition IV.7.a above shall include:

1) Identification of the specific equipment to be shut down, its location and permit number (if permitted), together with an identification of the source(s) affected;
2) The reasons for the shutdown;
3) The expected length of time that the equipment will be out of service;
4) Identification of the nature and quantity of emissions likely to occur during the shutdown;
5) Measures, including extra labor and equipment, which will be taken to minimize the length of the shutdown, the amount of air contaminants emitted, or the ambient effects of the emissions;
6) Measures which will be taken to shut down or curtail the affected source(s) or the reasons why it is impossible or impracticable to shut down or curtail the affected source(s) during the shutdown; and
7) Such other information as may be required by the Department.

8. Breakdowns (§2108.01.c)

a. In the event that any air pollution control equipment, process equipment, or other source of air contaminants breaks down in such manner as to have a substantial likelihood of causing the emission of air contaminants in violation of this permit, or of causing the emission into the open air of potentially toxic or hazardous materials, the person responsible for such equipment or source shall immediately, but in no event later than sixty (60) minutes after the commencement of the breakdown, notify the Department of such breakdown and shall, as expeditiously as possible but in no event later than seven (7) days after the original notification, provide written notice to the Department.

b. To the maximum extent possible, all oral and written notices required shall include all pertinent facts, including:

1) Identification of the specific equipment which has broken down, its location and permit number (if permitted), together with an identification of all related devices, equipment, and other sources which will be affected.
2) The nature and probable cause of the breakdown.
3) The expected length of time that the equipment will be inoperable or that the emissions will continue.
4) Identification of the specific material(s) which are being, or are likely to be emitted, together
with a statement concerning its toxic qualities, including its qualities as an irritant, and its potential for causing illness, disability, or mortality.

5) The estimated quantity of each material being or likely to be emitted.

6) Measures, including extra labor and equipment, taken or to be taken to minimize the length of the breakdown, the amount of air contaminants emitted, or the ambient effects of the emissions, together with an implementation schedule.

7) Measures being taken to shut down or curtail the affected source(s) or the reasons why it is impossible or impractical to shut down the source(s), or any part thereof, during the breakdown.

c. Notices required shall be updated, in writing, as needed to advise the Department of changes in the information contained therein. In addition, any changes concerning potentially toxic or hazardous emissions shall be reported immediately. All additional information requested by the Department shall be submitted as expeditiously as practicable.

d. Unless otherwise directed by the Department, the Department shall be notified whenever the condition causing the breakdown is corrected or the equipment or other source is placed back in operation by no later than 9:00 AM on the next County business day. Within seven (7) days thereafter, written notice shall be submitted pursuant to Paragraphs a and b above.

e. Breakdown reporting shall not apply to breakdowns of air pollution control equipment which occur during the initial startup of said equipment, provided that emissions resulting from the breakdown are of the same nature and quantity as the emissions occurring prior to startup of the air pollution control equipment.

f. In no case shall the reporting of a breakdown prevent prosecution for any violation of this permit or Article XXI.

9. Cold Start (§2108.01.d)

In the event of a cold start on any fuel-burning or combustion equipment, except stationary internal combustion engines and combustion turbines used by utilities to meet peak load demands, the person responsible for such equipment shall report in writing to the Department the intent to perform such cold start at least 24 hours prior to the planned cold start. Such report shall identify the equipment and fuel(s) involved and shall include the expected time and duration of the startup. Upon written application from the person responsible for fuel-burning or combustion equipment which is routinely used to meet peak load demands and which is shown by experience not to be excessively emissive during a cold start, the Department may waive these requirements and may instead require periodic reports listing all cold starts which occurred during the report period. The Department shall make such waiver in writing, specifying such terms and conditions as are appropriate to achieve the purposes of Article XXI. Such waiver may be terminated by the Department at any time by written notice to the applicant.

10. Emissions Inventory Statements (§2108.01.e)

a. Emissions inventory statements in accordance with §2108.01.e shall be submitted to the Department by March 15 of each year for the preceding calendar year. The Department may require more frequent submittals if the Department determines that more frequent submissions are required by the EPA or that analysis of the data on a more frequent basis is necessary to implement the requirements of Article XXI or the Clean Air Act.

b. The failure to submit any report or update within the time specified, the knowing submission of
false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

11. Orders (§2108.01.f)

In addition to meeting the requirements of General Condition III.28 and Site Level Conditions IV.7 through IV.10 above, inclusive, the person responsible for any source shall, upon order by the Department, report to the Department such information as the Department may require in order to assess the actual and potential contribution of the source to air quality. The order shall specify a reasonable time in which to make such a report.

12. Violations (§2108.01.g)

The failure to submit any report or update thereof required by General Condition III.28 and Site Level Conditions IV.7 through IV.11 above, inclusive, within the time specified, the knowing submission of false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

13. Emissions Testing (§2108.02)

a. On or before December 31, 1981, and at two-year intervals thereafter, any person who operates, or allows to be operated, any piece of equipment or process which has an allowable emission rate, of 100 or more tons per year of particulate matter, sulfur oxides or volatile organic compounds shall conduct, or cause to be conducted, for such equipment or process such emissions tests as are necessary to demonstrate compliance with the applicable emission limitation(s) of this permit and shall submit the results of such tests to the Department in writing. Emissions testing conducted pursuant to this section shall comply with all applicable requirements of Article XXI §2108.02.e.

b. Orders. In addition to meeting the requirements of Site Level Condition IV.13.a above, the person responsible for any source shall, upon order by the Department, conduct, or cause to be conducted, such emissions tests as specified by the Department within such reasonable time as is specified by the Department. Test results shall be submitted in writing to the Department within 90 days after completion of the tests, unless a different period is specified in the Department's order. Emissions testing shall comply with all applicable requirements of Article XXI §2108.02.e.

c. Tests by the Department. Notwithstanding any tests conducted pursuant to Site Level Conditions IV.13.a and IV.13.b above, the Department or another entity designated by the Department may conduct emissions testing on any source or air pollution control equipment. At the request of the Department, the person responsible for such source or equipment shall provide adequate sampling ports, safe sampling platforms and adequate utilities for the performance of such tests.

d. Testing Requirements. No later than 45 days prior to conducting any tests required by this permit, the person responsible for the affected source shall submit for the Department's approval a written test protocol explaining the intended testing plan, including any deviations from standard testing procedures, the proposed operating conditions of the source during the test, calibration data for specific test equipment and a demonstration that the tests will be conducted under the direct supervision of persons qualified by training and experience satisfactory to the Department to conduct such tests. In addition, at least 30 days prior to conducting such tests, the person responsible shall notify the Department in writing of the time(s) and date(s) on which the tests will be conducted and shall allow Department personnel to observe such tests, record data, provide pre-weighted
filters, analyze samples in a County laboratory and to take samples for independent analysis. Test results shall be comprehensively and accurately reported in the units of measurement specified by the applicable emission limitations of this permit.

e. Test methods and procedures shall conform to the applicable reference method set forth in this permit or Article XXI Part G, or where those methods are not applicable, to an alternative sampling and testing procedure approved by the Department consistent with Article XXI §2108.02.e.2.

f. **Violations.** The failure to perform tests as required by this permit or an order of the Department, the failure to submit test results within the time specified, the knowing submission of false information, the willful failure to submit complete results, or the refusal to allow the Department, upon presentation of a search warrant, to conduct tests, shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

14. **Abrasive Blasting (§2105.51)**

a. Except where such blasting is a part of a process requiring an operating permit, no person shall conduct or allow to be conducted, abrasive blasting or power tool cleaning of any surface, structure, or part thereof, which has a total area greater than 1,000 square feet unless such abrasive blasting complies with all applicable requirements of Article XXI §2105.51.

b. In addition to complying with all applicable provisions of §2105.51, no person shall conduct, or allow to be conducted, abrasive blasting of any surface unless such abrasive blasting also complies with all other applicable requirements of Article XXI unless such requirements are specifically addressed by §2105.51.

15. **Asbestos Abatement (§2105.62, §2105.63)**

In the event of removal, encasement, or encapsulation of Asbestos-Containing Material (ACM) at a facility or in the event of the demolition of any facility, the permittee shall comply with all applicable provisions of Article XXI §2105.62 and §2105.63.

16. **Protection of Stratospheric Ozone (40 CFR Part 82)**

a. Permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:

1) All containers in which a Class I or Class II substance is stored or transported, all products containing a Class I substance, and all products directly manufactured with a process that uses a Class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106;
2) The placement of the required warning statement must comply with the requirements pursuant to §82.108;
3) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110; and
4) No person may modify, remove or interfere with the required warning statement except as described in §82.112.

b. Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F:
1) Persons opening appliances for maintenance, service, repair or disposal must comply with the
prohibitions and required practices pursuant to §82.154 and §82.156;
2) Equipment used during the maintenance, service, repair or disposal of appliances must comply
with the standards for recycling and recovery equipment pursuant to §82.158;
3) Persons maintaining, servicing, repairing or disposing of appliances, must be certified by an
approved technician certification program pursuant to §82.161;
4) Persons maintaining, servicing, repairing or disposing of appliances must certify to the
Administrator of the U.S. Environmental Protection Agency pursuant to §82.162;
5) Persons disposing of small appliances, motor vehicle air conditioners (MVAC) and MVAC-
like appliances, must comply with the record keeping requirements pursuant to §82.166;
6) Owners of commercial or industrial process refrigeration equipment must comply with the leak
repair requirements pursuant to §82.156; and
7) Owners or operators of appliances normally containing 50 or more pounds of refrigerant must
keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

c. If the permittee manufactures, transforms, destroys, imports or exports a Class I or Class II
substance, the Permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart
A (Production and Consumption Controls).

d. If the permittee performs a service on a motor vehicle that involves an ozone-depleting substance,
refrigerant or regulated substitute substance in the MVAC, the Permittee is subject to all the
applicable requirements as specified in 40 CFR Part 82, Subpart B (Servicing of Motor Vehicle Air
Conditioners).

e. The permittee may switch from any ozone-depleting substance to any alternative that is listed as
acceptable in the Significant New Alternatives Policy (SNAP) program promulgated pursuant to
40 CFR Part 82, Subpart G.

17. Volatile Organic Compound Storage Tanks (§2105.12.a)

No person shall place or store, or allow to be placed or stored, a volatile organic compound having a vapor
pressure of 1.5 psia or greater under actual storage conditions in any aboveground stationary storage tank
having a capacity equal to or greater than 2,000 gallons but less than or equal to 40,000 gallons, unless there
is in operation on such tank pressure relief valves which are set to release at the higher of 0.7 psig of pressure
or 0.3 psig of vacuum or at the highest possible pressure and vacuum in accordance with State or local fire
codes, National Fire Prevention Association guidelines, or other national consensus standard approved in
writing by the Department. Petroleum liquid storage vessels that are used to store produced crude oil and
condensate prior to lease custody transfer are exempt from these requirements.

18. Major Source NOx Reasonably Available Control Technology (RACT) Plan Approval Order and
Agreement No. 217 (§2105.06)

Pursuant to Plan Approval Order and Agreement No. 217, issued on March 8, 1996, and Article XXI,
§2105.06, the permittee shall comply with all provisions including all applicable definitions, emission
limitations, restrictions, testing, monitoring, record keeping and reporting for this major source of NOx.

19. Fugitive Emissions (§2105.49)

The person responsible for a source of fugitive emissions, in addition to complying with all other applicable
provisions of this permit shall take all reasonable actions to prevent fugitive air contaminants from becoming airborne. Such actions may include, but are not limited to:

a. The use of asphalt, oil, water, or suitable chemicals for dust control;
b. The paving and maintenance of roadways, parking lots and the like;
c. The prompt removal of earth or other material which has been deposited by leaks from transport, erosion or other means;
d. The adoption of work or other practices to minimize emissions;
e. Enclosure of the source; and
f. The proper hooding, venting, and collection of fugitive emissions.

20. Episode Plans (§2106.02)

The permittee shall upon written request of the Department, submit a source curtailment plan, consistent with good industrial practice and safe operating procedures, designed to reduce emissions of air contaminants during air pollution episodes. Such plans shall meet the requirements of Article XXI §2106.02.

21. New Source Performance Standards (§2105.05)

a. It shall be a violation of this permit giving rise to the remedies provided by §2109.02 of Article XXI for any person to operate, or allow to be operated, any source in a manner that does not comply with all requirements of any applicable NSPS now or hereafter established by the EPA, except if such person has obtained from EPA a waiver pursuant to Section 111 or Section 129 of the Clean Air Act or is otherwise lawfully temporarily relieved of the duty to comply with such requirements.

b. Any person who operates, or allows to be operated, any source subject to any NSPS shall conduct, or cause to be conducted, such tests, measurements, monitoring and the like as is required by such standard. All notices, reports, test results and the like as are required by such standard shall be submitted to the Department in the manner and time specified by such standard. All information, data and the like which is required to be maintained by such standard shall be made available to the Department upon request for inspection and copying.

22. Acid Rain Program (§2103.22.j) (40 CFR 72 through 40 CFR 78)

Pursuant to §2103.22 (Standard Acid Deposition Control Requirements), the Permittee shall comply with all provisions of the Acid Rain permit issued for this source, and any other applicable requirements contained in 40 CFR 72 through 40 CFR 78. The Acid Rain permit for this source is attached to this permit as Appendix A, and is incorporated by reference.

Emissions exceeding any allowances that the Permittee lawfully holds under the Title IV Acid Rain Program of the Clean Air Act are prohibited, subject to the following limitations: (§2103.22.j.7)

a. No revision of this permit shall be required for increases in emissions that are authorized by allowances acquired under the Title IV Acid Rain Program, provided that such increases do not require a permit revision under any other applicable requirement.

b. No limit shall be placed on the number of allowances held by the Permittee. The Permittee may not use allowances as a defense to noncompliance with any other applicable requirement.
c. Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Clean Air Act.

"PERMIT SHIELD" IN EFFECT.
EMISSION UNIT LEVEL TERMS AND CONDITIONS

A. Main Boiler No. 1, Stack No. 001a

Process Description: Tangentially-Fired Boiler
Facility ID: Main Boiler No.1
Maximum Design Rate: 6,000 MMBtu/hr (maximum hourly rating); 5,500 MMBtu/hr (maximum continuous rating) coal and synfuel; 1,028 MMBtu/hr natural gas
Fuel(s): Coal (primary) or synfuel; Natural gas (auxiliary)
Control Device(s): Low NOx burners, electrostatic precipitator (ESP) with flue gas conditioning, selective catalytic reduction (SCR) & flue gas desulfurization (FGD)
CEM: NOx, SO2, CO2 and opacity (COM)

1. Restrictions:

a. No person shall operate or allow to be operated the Main Boiler in such manner that particulate matter (PM) emissions due to natural gas combustion exceed 0.008 lb/MMBtu. (§2104.02.a.1.A)

b. No person shall operate or allow to be operated the Main Boiler in such manner that particulate matter (PM) emissions when combusting coal and natural gas concurrently in the Main Boiler exceeds the allowable emissions (lb/MMBTU) calculated by the formula in §2104.02.a.3, Installation Permit No. 0054-I004b Condition V.A.1.d below: (§2104.02.a.3, Installation Permit No. 0054-I004b Condition V.A.1.d)

\[ A = x_{ai} \]

\[ A = \text{allowable emissions in pounds per million BTUs of actual heat input;} \]
\[ i = \text{fuel type (i.e. natural gas, coal, etc.)} \]
\[ x_{ai} = \text{fraction of total actual heat input in BTUs provided by fuel type } i \text{ and} \]
\[ a_{i} = \text{allowable emissions in pounds per million BTUs of actual heat input for fuel type } i \text{ from} \]
\[ §2104.02.a.1.A (0.008) \]

c. Sulfur oxides (SOx) emissions, expressed as sulfur dioxide, from Stack-001a shall not exceed 3,176 lb/hr on a daily average basis. (§2103.12.a.2.F, 40 CFR §51.1204)

d. Nitrogen oxide (NOX) emissions from the Main Boiler shall not exceed the following: (25 Pa. Code §129.97(g))

1) 0.12 lb/MMBtu, when the inlet temperature to the SCR is equal to or greater than 600 degrees Fahrenheit;
2) 0.35 lb/MMBtu, when the inlet temperature to the SCR is less than 600 degrees Fahrenheit; and
3) 5,621 tons/year.

e. Ammonia slip shall not exceed 1 ppmv @ 3% O2 when the boiler is operating under steady state conditions and shall not exceed 10 ppmv @ 3% O2 at any time. (IP No. 0054-I002, Condition V.A.1.b, issued June 13, 2001)

f. Emissions of ammonia shall not exceed 11.3 lb/hr or 49.5 tons/year where a year is defined as any 12 consecutive months at any time. (IP No. 0054-I002, Condition V.A.1.c, issued June 13, 2001)
The usage of synfuel at the Main Boiler shall not exceed 1.7 million tons per twelve (12) consecutive month period, with compliance to be demonstrated at the end of each month. (§2102.04.a.5.L and Determination of Minor Significance, issued July 30, 2002)

The Department must approve any change or modification to the type of binder used in synfuel before such change can take place. (§2102.04.a.5.L and Determination of Minor Significance, issued July 30, 2002)

Emissions from the Main Boiler Stack-001a shall not exceed the limitations in Table V-A-1 at any time: (§2103.12, §2104.02.a.1, §2104.02.a.2, §2104.02.a.3, §2104.03.a.2, §2103.12.a.2.F RACT Order No. 217, IP No. 0054-I002, 93-I-0009-C, Installation Permit No. 0054-I004b Condition V.A.1.g)

**TABLE V-A-1: Main Boiler Emission Limitations**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Coal Firing lb/hr</th>
<th>Annual Emission Limit tons/year(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter</td>
<td>224.3</td>
<td>982</td>
</tr>
<tr>
<td>PM 10(0)</td>
<td>138</td>
<td>554.1</td>
</tr>
<tr>
<td>PM 2.5(0)</td>
<td>138</td>
<td>554.1</td>
</tr>
<tr>
<td>Nitrogen Oxides</td>
<td>720(3)</td>
<td>5,621</td>
</tr>
<tr>
<td></td>
<td>1400(3)</td>
<td></td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>130.9</td>
<td>573.4</td>
</tr>
<tr>
<td>Sulfur Dioxide</td>
<td>10.080(5)</td>
<td>13,911</td>
</tr>
<tr>
<td></td>
<td>3.176(6)</td>
<td></td>
</tr>
<tr>
<td>Volatile Organic Compounds</td>
<td>18.7</td>
<td>82.0</td>
</tr>
<tr>
<td>Ammonia</td>
<td>11.3</td>
<td>49.5</td>
</tr>
<tr>
<td>Hydrogen Chloride (HCl)</td>
<td>12.0</td>
<td>52.6</td>
</tr>
<tr>
<td>Hydrogen Fluoride (HF)</td>
<td>9.75</td>
<td>42.7</td>
</tr>
<tr>
<td>Sulfuric Acid Mist (H₂SO₄)</td>
<td>46.8</td>
<td>187.9</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>0.207</td>
<td>0.313</td>
</tr>
</tbody>
</table>

(1) A year is defined as any consecutive 12-month period.
(2) SCR inlet temperature ≥600°F (averaged over 24-hours)
(3) SCR inlet temperature <600°F (averaged over 24-hours)
(4) PM-10 and PM-2.5 emission limits include condensables
(5) Rolling 3 hour average
(6) Daily average

The operating temperature of the SCR catalyst shall not exceed 810°F. (IP No. 0054-I002, Condition V.A.1.d, issued June 13, 2001)

In order to comply with V.A.1.b and V.A.1.i above, the electrostatic precipitator (ESP) shall be operated and maintained as during the most recent emissions test performed in accordance with
Article XXI, §2108.02 that demonstrated compliance with the conditions of this permit. The flue gas conditioning system shall be used with the ESP as necessary to maintain compliance with this permit (§2103.12.a.2.B, Installation Permit No. 0054-I004b Condition V.A.1.h)

l. In accordance with Article XXI, §2109, “Enforcement,” the Department may enforce the NOx allowance provisions of this permit and Article XXI, §2105.100. (§2105.100.h.2, IP No. 0054-I002, Condition V.A.1.g, issued June 13, 2001)

m. The permittee, as of the allowance transfer deadline per 40 CFR §72.2., shall hold SO2 allowances in the unit’s compliance account not less than the total annual emissions of SO2 for the previous year. (40 CFR §72.2(c), Title IV Acid Rain Permit, Article XXI §2103.22.j. §2103.50)

n. A Designated Representative for the facility, for the purposes of the Acid Rain Program, must be identified on a certificate of representation form; and this Designated Representative shall certify all Acid Rain Submissions. (40 CFR §72.20-72.24, Title IV Acid Rain Permit, Article XXI §2103.22.j. §2103.50)

o. The permittee shall operate and maintain the flue gas desulfurization system such that a minimum of three spray levels are operating and maintained at all times while the main boiler is combusting coal or synfuel. (§2105.03; §2102.04, Installation Permit No. 0054-I004b Condition V.A.1.f)

p. The permittee shall operate the Hydrated Lime System at all times while the main boiler is combusting coal except during periods of system repair or maintenance. During such periods, the Permittee shall take all reasonable measures to restore the system to normal operations as soon as possible. The Hydrated Lime System shall be programmed to maintain the hydrated lime injection rate (lb/ton of coal) that is consistent with the documented operating procedure for this system to minimize emissions from Boiler No. 1. (§2105.03)

q. Hydrogen Chloride (HCl) emissions from Stack-001a shall not exceed either 0.002 lb/MMBtu or 0.02 lb/MWhr. (40 CFR Part 63 Subpart UUUUU Table 2; 40 CFR 63.9991)

r. Except as specified in condition V.A.1.a and V.A.1.b above, PM-10 emissions exiting Stack-001a shall not exceed any of 0.080 lb/MMBtu, 138 pounds/hour, or 554 tons/year. (§2102.07, §2102.04.b.6, Installation Permit No. 0054-I004a)

s. Except as specified in condition V.A.1.a and V.A.1.b above, PM-2.5 emissions exiting Stack-001a shall not exceed any of 0.080 lb/MMBtu, 138 pounds/hour, or 554 tons/year. (§2105.03, §2102.04.b.6, Installation Permit No. 0054-I004a)

t. Sulfuric Acid Mist (H2SO4) emissions from Stack-001a shall not exceed 46.8 lbs/hour and 187.9 tons/year. (§2102.04.b.6, Installation Permit No. 0054-I004a)

u. As required by the SO2 Data Requirements Rule, an air dispersion modeling study shall be performed in which the results of such study shall yield potential emission limits sufficient to demonstrate compliance with the 2012 SO2 NAAQS. (§2103.12.a.2.F, 40 C.F.R. §§51.1203(d)(3), 51.1204)

2. Testing Requirements (§2103.12.l, §2108.02):

a. The permittee shall perform PM, PM-10, PM-2.5, NOx, SO2, SO3, H2SO4, HCl, Hg, lead, and HF
emissions testing in Stack-001a of the FGD system in order to determine compliance with the emission limitations specified in condition V.A.1.i above. Emissions testing shall be performed with only 3 FGD spray levels in operation and maximum routine operation (at least 90% of maximum continuous heat input or gross electric load) of the boiler to establish compliance with this permit. Such testing shall be conducted in accordance with applicable U.S. EPA approved test methods. Article XXI §2108.02, and as approved by the Department. Only upon approval by the Department shall the permittee be allowed to use more than 3 FGD spray levels during the testing solely to ensure compliance with gas opacity standards. (§2108.02, §2102.04.b.6, §2105.03, Installation Permit No. 0054-I004b Condition V.A.2.a)

1) Emissions testing shall be conducted in Stack-001a as follows: (IP No. 0054-I004b Condition V.A.2.a.1)

   a) Particulate Matter shall be determined by EPA Method 5B, or equivalent as approved by the Department;
   b) PM-10 and PM-2.5 shall be determined by EPA Method 5B and 202, or an equivalent method as approved by the Department;
   c) Nitrogen oxides shall be determined by any of the EPA Methods 7 through 7E;
   d) SO₂ shall be determined by recently certified CEMs required in section V.A.3 below;
   e) SO₃ and H₂SO₃ shall be determined by EPA Method 8, or equivalent as approved by the Department;
   f) HCl and HF shall be determined by EPA Method 26A;
   g) Lead shall be determined by EPA Method 12, or equivalent as approved by the Department;
   h) Mercury emissions shall be determined by a Department-approved test method; and
   i) NOₓ, SO₂ and Hg emissions may be determined by recently certified CEMs required in section V.A.3 below in lieu of reference test methods.

2) Emissions testing on the inlet shall be conducted upon request by the Department as follows: (IP No. 0054-I004b Condition V.A.2.a.2)

   a) Inlet HCl shall be determined by EPA Method 26A, and
   b) Inlet SO₂ shall be determined by any of EPA Methods 6 through 6C.

3) All emissions tests required by condition V.A.2.a above shall be conducted with the SCR system in maximum routine operation. (§2108.02, §2102.04.b.6, §2105.03, IP No. 0054-I004b Condition V.A.2.a.3))

4) COM and Method 9 opacity observation data shall be recorded during the emissions testing and provided as part of the test report. (§2108.02, §2102.04.b.6, §2105.03, IP No. 0054-I004b Condition V.A.2.a.4)

5) Analyses of representative samples of the coal combusted during the test shall be provided as part of the test report. Each analysis shall include but not be limited to proximate and ultimate analyses, chlorine, fluorine, mercury, and lead content; percent sulfur; heating value; ash content; moisture content. (§2108.02, §2102.04.b.6, §2105.03, IP No. 0054-I004b Condition V.A.2.a.5)

6) The permittee shall monitor and record the following parameters at the electrostatic precipitator (ESP) during the stack test continuously (or a minimum of once every fifteen minutes) and provide the average, maximum and minimum data in Conditions V.A.2.a.6a), V.A.2.a.6b)
and V.A.2.a.6)c) below as part of the test report: (§2108.02, §2102.04.b.6, §2105.03, IP No. 0054-I004b Condition V.A.2.a.6)

a) The primary voltage (in volts) and current (in amps) at each transformer on the ESP.
b) The secondary voltage (in volts) and current (in amps) at each transformer on the ESP, and
c) The spark rate (in sparks per minute) in each section of the ESP.

7) The permittee shall monitor the following parameters for the selective catalytic reduction (SCR) system during the stack test continuously (or a minimum of once every fifteen minutes) and provide the data as part of the test report: (§2108.02, §2102.04.b.6, §2105.03, IP No. 0054-I004b Condition V.A.2.a.7)

a) Catalytic bed inlet gas temperature;
b) Ammonia solution injection rate; and

c) Ammonia solution concentration (receipt of certification by vendor).

8) The permittee shall monitor continuously (or a minimum of once every fifteen minutes) the following parameters for the flue gas desulfurization equipment during the stack test and provide the data as part of the test report: (§2108.02, §2102.04.b.6, §2105.03, IP No. 0054-I004b Condition V.A.2.a.8)

a) Absorber liquid flowrate and pH;
b) Percent limestone in absorber liquid (once during each test run);
c) Differential pressure drop across the absorber;
d) Flue gas pressure drop across mist eliminators;
e) Absorber inlet and outlet temperature;
f) Absorber reaction tank pH; and

g) Absorber reaction tank gypsum slurry density.

9) NO\textsubscript{X}, SO\textsubscript{2}, volumetric gas flowrate and O\textsubscript{2} or CO\textsubscript{2} shall be determined by the certified CEMs at the outlet stack for the period of testing and minute and hourly average data shall be included in the test report. (§2108.02, §2102.04.b.6, §2105.03, (IP No. 0054-I004b Condition V.A.2.a.9)

10) Inlet test ports shall be installed prior to the FGD unit but after the ESP and SCR. (§2108.02, §2102.04.b.6, §2105.03, (IP No. 0054-I004b Condition V.A.2.a.10)

11) All relevant operating parameters (e.g., boiler steam flow, exhaust gas, gross megawatts, heat input and stack flue gas volumetric flow rate, flue gas conditioning system operating parameters, SO\textsubscript{2} treatment system operating parameters, ESP, SCR and FGD operating parameters specified in conditions V.A.2.a.6), V.A.2.a.7) and V.A.2.a.8) above shall be recorded at appropriate intervals throughout the duration of stack test. A discussion of the recorded operating parameters and values shall be included in the test report. (§2108.02, §2102.04.b.6, §2105.03, (IP No. 0054-I004b Condition V.A.2.a.11)

b. The permittee shall conduct emission testing as specified in condition V.A.2.a above at least once every two years after the most recent test for NO\textsubscript{X}, SO\textsubscript{2}, PM, PM-10, PM-2.5, lead and Hg. (§2108.02, §2102.04.b.6, §2103.12.h.1, §2105.03, IP No. 0054-I004b Condition V.A.2.b)

c. Emission testing as specified in condition V.A.2.a above shall be conducted at least once every five years after the most recent test for HCl, SO\textsubscript{3} and H\textsubscript{2}SO\textsubscript{4}. (§2108.02, §2102.04.b.6, §2105.03, IP
d. Emissions testing required by Condition V.A.2.a above shall be for filterable and condensable particulate matter. Compliance with Condition V.A.1.b above may be determined using the front-half catch of Method 5. (§2108.02)

e. The Department may approve the use of properly operated, maintained and calibrated continuous emissions monitors in lieu of stack testing for nitrogen oxides and sulfur oxides as required by Condition V.A.2.a. above. (§2108.02, §2103.12.h.1)

f. Compliance with the 24-hour and annual nitrogen oxides emission limitations of V.A.1.d above shall be determined through use of continuous emissions monitoring data. (RACT Order No. 217, Condition 1.3, issued March 8, 1996)

g. Emissions testing shall be performed biennially to demonstrate compliance with the ammonia emissions limitation of 1.0 ppm_{avg} @ 3% O_{2} and the corresponding ammonia emission limits in V.A.1.f above in accordance with EPA test method 27 (or equivalent as approved by the Department) and Article XXI §2108.02.d and e.. (IP No. 0054-I002, Condition V.A.2.b, issued June 13, 2001)

h. The Department reserves the right to require additional emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition IV.13 above and Article XXI §2108.02. (§2103.12.h.1)

3. Monitoring Requirements (§2103.12.i, §2108.03):

a. The permittee shall monitor the following parameters for the selective catalytic reduction (SCR) system: (§2103.12.i, IP No. 0054-I002, Condition V.A.3.a, issued June 13, 2001)

1) catalytic bed inlet gas temperature,
2) ammonia solution injection rate, and
3) ammonia solution concentration (receipt of certification from vendor).

b. The permittee shall operate and maintain the SCR equipment and monitoring instrumentation in accordance with the manufacturer’s specifications and good air pollution control practice. (§2105.03, §2102.04.b.6, IP No. 0054-I002, Condition V.A.3.b, issued June 13, 2001)

c. The permittee shall continuously monitor the following parameters at the electrostatic precipitator (ESP): (§2103.12.i)

1) The primary voltage (in volts) and current (in amps) at each transformer on the ESP.
2) The secondary voltage (in volts) and current (in amps) at each transformer on the ESP.
3) The spark rate (in sparks per minute) in each section of the ESP.

d. The permittee shall operate and maintain continuous emission monitoring (CEM) equipment on the new main boiler stack for NOX, SO2 and O2 or CO2 in accordance with PADEP Continuous Source Monitoring Manual and Department approval. (§2108.03.a, IP No. 0054-I004b Condition V.A.3.a, 40 CFR 51.165(b))

1) Continuous monitoring systems for measuring nitrogen oxides shall comply with Performance Specification 2 or 40 CFR 75. (40 CFR 60 Appendix B)
2) Continuous monitoring systems for measuring sulfur dioxide shall comply with Performance Specification 2 or 40 CFR 75. (40 CFR 60 Appendix B)

3) Continuous monitoring systems for measuring oxygen shall comply with Performance Specification 3 or 40 CFR 75. (40 CFR 60 Appendix B)

4) Continuous monitoring systems for measuring carbon dioxide shall comply with Performance Specification 3 or 40 CFR 75. (40 CFR 60 Appendix B)

5) The permittee shall calibrate, maintain, and operate a continuous monitoring system (CEMS) for the subject boiler, and record the output of the system, for measuring nitrogen oxide emissions discharged to the atmosphere from the new main boiler stack. The CEMS data recorder shall convert the data to the required reporting units in compliance with 25 PA Code §§139.101-139.111 relating to requirements for continuous in-stack monitoring for stationary sources. (§2108.03.b.2, RACT Order No. 217, Condition 1.2)

6) The permittee shall submit the results of the continuous nitrogen oxides monitoring systems on a regular schedule and in a format acceptable to the Department and in compliance with 25 Pa. Code 139.101 – 139.111. (§2108.03.b.3)

7) Continuous NOx, SO2 and O2 or CO2 monitoring systems shall meet the minimum data availability requirements in 25 Pa. Code 139, Subchapter C. (§2108.03.b.4, §2102.04.b.6)

c. The permittee shall certify, operate, and maintain continuous emission monitors in accordance with 40 CFR Part 75 or approved alternative for SO2, volumetric gas flowrate, NOx, and CO2 emissions from the new main boiler stack. (40 CFR 75, Article XXI §2103.22.j, §2103.50, IP No. 0054-I004b Condition V.A.3.b)

1) Continuous monitoring systems shall comply with the Installation and Performance Specifications of appendix A of Part 75. (40 CFR 75.10(b))

2) The permittee shall determine and record the heat input for every hour or part of an hour of any fuel that is combusted per Appendix F of Part 75. (40 CFR 75.10(b))

3) Continuous monitoring systems shall meet the minimum data availability requirements in 40 CFR part 75. (40 CFR 75)

4) The NOx and SO2 CEMs shall record emissions in terms of lb/MMBtu and lb/hr for each pollutant. (§2108.03.b.4, §2102.04.b.6)

f. The permittee shall conduct monitoring of the FGD system as follows (§2102.04.b.6, §2105.03, IP No. 0054-I004b Condition V.A.3.c):

a) Pressure drop across the mist eliminators;

b) Pressure drop across the scrubber;

c) Absorber liquid pH;

d) Number of pumps in operation; and

e) Absorber liquid flowrate.
g. The permittee shall operate and maintain continuous opacity monitoring (COM) equipment, in accordance with Department approval. The equipment shall be located in the ductwork before the FGD and after the ESP and SCR control devices. The COM shall be calibrated and may be used as an indicator of ESP performance. The COM opacity data will not be suitable for enforcement of §2104.01 visible emissions requirements. (§2108.03.a; §2105.03, IP No. 0054-I004b Condition V.A.4.d)

h. On a monthly basis, the permittee shall record the lead content of coal combusted. (The lead content may be provided through vendor analyses or site specific analyses.) (§2102.04.b.6, §2105.03, IP No. 0054-I004b Condition V.A.4.e)

i. The permittee shall install, operate and maintain a wet gas particle analyzer (WGPA) that has an output signal correlated to be proportional to the EPA Reference Method 5B measurements in the exhaust gas stream as an indicator to PM10 while the FGD is operating. (§643(a)(1))

j. The correlation established by the WGPA in Condition V.A.3.i above, along with the exhaust gas stream volumetric flow rate shall be used to estimate PM10 emissions in terms of ‘pounds per hour’ to assure compliance with Conditions V.A.1.i and V.A.1.r above on a rolling 3-hour block averaging basis. (§643(a)(2))

k. The WGPA shall conduct continuous measurements of PM10 in the exhaust gas stream every 60 seconds by extracting a partial flow of gas from the stream, drying the extracted gas to 320 degrees Fahrenheit, measuring the PM10 content through a scattered light measurement technique and recording the results by the Permittee’s DAHS. (§643(b)(1))

l. The Permittee’s DAHS shall be used to confirm the operational status of the WGPA while Unit No. 1 is operating except during periods of QA/QC activities, maintenance or malfunction.. (§643(b)(2))

m. The QA/QC activities for the WGPA shall include maintenance procedures prescribed by the manufacturer. The QA/QC activities for the certified exhaust gas stream flow monitor shall include those specified in CFR 75. (§643(b)(3))

n. The DAHS shall be reconfigured to allow for recording of the WGPA signal, PM10 concentration (gr/scf) as determined by the correlation, and PM10 emission rate (lb/hr) calculated as the product of the PM10 concentration and volumetric flow rate (with appropriate units conversion factors). An excursion from the applicable emissions limits shall be defined as any 3-hour block period (the nominal time required to conduct three one-hour stack tests) in which the average PM10 emission rate > 118 lb/hr (filterable only). (§643(b)(4))

o. The correlation testing to establish the relationship between the WGPA signal and PM10 (EPA Method 5B equivalent) shall be approved by The Department before a final correlation is established. (§643(c))

4. Record Keeping Requirements (§2103.12.j):

a. The permittee shall maintain all appropriate records to demonstrate compliance with the requirements of §2105.06 and RACT Order No. 217. Such records shall provide sufficient data and calculations to clearly demonstrate that all requirements of §2105.06 and RACT Order No. 217 are met. The permittee shall record and maintain such data and information required to determine
compliance for the facility in a time frame consistent with the averaging period of the requirements of both §2105.06 and RACT Order No. 217. Such information shall include, but not be limited to, the following minimum information which shall be submitted to the Department as a written report at three month intervals: (§2108.03.d, §2105.06, RACT Order No. 217, Condition 1.4)

1) All recording and reporting required by Section 2108.03 of Article XXI, and entitled “Continuous Emission Monitoring.”

2) An identification of each instance during the reporting period during which emissions exceeded the applicable emission limitations rates in condition V.A.1.d above and an identification of the reasons, if known, for such exceedance. The averaging period used for making such identification shall correspond to the averaging period specified in condition V.A.1.d above.

3) An identification of each period during which the continuous emission monitoring system was inoperative, except for zero and span drift checks, the reasons therefore, and the nature of repairs or adjustments performed or to be performed.

4) An identification of calibrations, zero and span drift checks, and other quality assurance procedures.

c. The permittee shall keep and maintain the following data for Main Boiler No. 1: (§2102.04.b.6, §2103.12.j, IP No. 0054-I004b Condition V.A.4.a)

1) Type and amount of fuel used (tons of coal/day, MMscf of natural gas/day);
2) Amount of synfuel used each month (tons);
3) Records of the type of synfuel binder used each month and the material safety data sheets for each binder used;
4) Steam load (lbs/hr, lbs/day; average daily steam load for each month);
5) Cold starts (date, time and duration of each occurrence);
6) Total operating hours, (hours/day, monthly and 12-month);
7) Records of operation, maintenance, inspection, calibration and/or replacement of combustion equipment;
8) Stack test protocols and reports;
9) Opacity data recorded by the COM (hourly averages);
10) Data specified to be monitored in condition V.A.3.f above;
11) Sufficient data to demonstrate compliance with condition V.A.1.o above;
12) Data required by 40 CFR Part 75 Subpart F and condition V.A.3.e above for continuous monitors. (40 CFR Part 75, Subpart F) and
13) Monthly average coal sulfur content, chlorine content, ash content and lead content.

d. The permittee shall maintain records of all air pollution control system performance evaluations and all records of calibration checks, adjustments, and maintenance performed on all equipment which is subject to this permit. (IP No.0054-I002, Condition V.A.4.b, issued June 13, 2001, §2103.05)

e. The permittee shall maintain a copy of the manufacturer’s specifications for the SCR air pollution control equipment on-site. (IP No.0054-I002, Condition V.A.4.c, issued June 13, 2001)

f. The permittee shall keep a record of the date, time, and cause of the malfunction of all air pollution control systems, and the action taken to correct the malfunction. (IP No.0054-I002, Condition V.A.4.d, issued June 13, 2001, §2108.01.b & §2108.01.c)

f. The permittee shall record at a minimum the following SCR control system information: (IP No.
0054-I002, Condition V.A.4.e, issued June 13, 2001)

1) Catalytic bed inlet temperature, ammonia solution injection rate, and ammonia solution concentration (once each shift).
2) All instances or episodes when the catalyst was bypassed due to boiler upset conditions and low boiler load conditions when the boiler exhaust temperature is outside of the operating range of the SCR catalyst (each occurrence).
3) All instances when the catalyst is bypassed (each occurrence).

The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2103.12.h.1, IP No.0054-I002, Condition V.A.4.a, issued June 13, 2001, §2108.01.b & §2108.01.c)

h. The permittee shall keep on-site for a period of five years copies of all reports, certifications, and other submissions and records required under the Acid Rain Program, and all documents used to complete an Acid Rain permit application or to demonstrate compliance with the requirements of the Acid Rain Program. (40 CFR §72.9(f), Article XXI §2103.22.j, §2103.50)

i. The permittee shall prepare and maintain on-site a QA/QC Plan as described in 40 CFR Part 75 Appendix B. (40 CFR §75.50(a)(4)) The permittee shall also maintain a file of all measurements, data, reports, and other required information for at least five years. (40 CFR §75.54)

j. All records of all required monitoring data and support information shall be retained by the facility for at least five (5) years. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. These records shall be made available to the Department upon request for inspection and/or copying. (§2103.12.j.2)

k. The permittee shall maintain records of all air pollution control system performance evaluations and all records of calibration checks, adjustments, and maintenance performed on the FGD system and CEMs (including the COM). (§2102.04.b.6, §2103.12.j, IP No. 0054-I004b Condition V.A.4.b)

l. The permittee shall maintain a copy of the manufacturer’s specifications for the FGD system on-site at all times. (§2102.04.b.6, §2103.12.j, IP No. 0054-I004b Condition V.A.4.c)

m. The permittee shall keep a record of the date, time, and cause of the malfunction of the FGD system, and the action taken to correct the malfunction. (§2102.04.b.6, §2103.12.j, IP No. 0054-I004b Condition V.A.4.d)

n. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2102.04.b.6, §2103.12.j, IP No. 0054-I004b Condition V.A.4.d)

o. The permittee shall keep on-site for a period of five years copies of all reports, certifications, and other submissions and records required under the Acid Rain Program, and all documents used to complete an Acid Rain permit application or to demonstrate compliance with the requirements of the Acid Rain Program and all required monitoring data and support information. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. These records shall be made available to the Department upon request for inspection and/or copying (40
p. The permittee shall prepare and maintain on-site a QA/QC Plan as described in 40 CFR Part 75 Appendix B. (40 CFR §75.50(a)(4)) The permittee shall also maintain a file of all measurements, data, reports, and other required information for at least five years. (40 CFR §75.54, IP No. 0054-I004b Condition V.A.4.f)

5. Reporting Requirements (§2103.12.k):

a. The permittee shall report non-compliance information required to be recorded by V.A.4.g above to the Department in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: (§2103.12.k.1)

b. The permittee shall report all cold starts of Main Boiler No. 1 to the Department in accordance with Site Level Condition IV.9 above. (§2108.01.d)

c. The permittee shall submit the results of the continuous nitrogen oxides monitoring systems on a regular schedule and in a format acceptable to the Department and in compliance with the USEPA Clean Air Markets Division Part 75 requirements. (§2108.03.b.3)

d. Within 30 days of the end of each calendar quarter, the following shall be reported to the Department: (Permit No. 1065009-003-00100, issued December 8, 1981; IP No. 0054-I002, Condition V.A.5.a, issued June 13, 2001; §2103.12.k.1, IP No. 0054-I004b Condition V.A.5.c)

1) Monthly average coal sulfur content, chlorine content, ash content and lead content; (The lead content can be provided through vendor analyses or site-specific analyses. In the event that fuel from more than one source is burned in a month, the permittee will provide an estimate of lead content of the blended fuel.);
2) Amount of coal fired each month (tons);
3) Maximum measured sulfur content of coal for any sample in each month (mixed coal as fired);
4) Monthly ammonia emissions;
5) Daily average and rolling 30-day average NOx emissions and cumulative 12-month total NOx emissions (lb/MMBtu and lb/hr; tons/year);
6) Daily average and rolling 30-day average SOx emissions and cumulative 12-month total SOx emissions (lb/MMBtu and lb/hr; tons/year);
7) Cumulative 12-month synfuel usage for each month during the compliance period;
8) All exceedances of the maximum catalytic bed inlet gas temperature (date, time, duration);
9) All exceedances of the 20% and 60% opacity limits (date, time, duration, reason); and
10) The average, maximum, and minimum spark rates and secondary voltages measured at each transformer of the ESP during the reporting period.
11) The hourly average and hourly maximum opacities recorded by the COM for each month; and
12) Any time the FGD was operated with less than 3 spray levels in service or the number of pumps necessary to supply sufficient scrubber liquid to operate at 3 spray levels were not in operation while combusting coal or synfuel.

e. The permittee shall provide the Department written notice 21 days prior to dates of periodic relative accuracy testing audits per 40 CFR 75.61(a)(5). (40 CFR §75.21(d), Article XXI §2103.22.j, §2103.50)
f. The permittee shall promptly report excess opacity emissions to the Department no later than two business days after the excursion. (Article XXI §2103.22.j, §2103.50)

g. Reporting instances of non-compliance in accordance with condition V.A.5.a above, does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. (§2103.12.k.1)

h. Beginning with 2012, the designated representative of the unit shall submit to the Department an annual report showing monthly gross electrical output and monthly useful thermal energy from the unit. The report is due by January 31 for the preceding calendar year. (Pa Code § 145.213; §2103.12.k)

6. Work Practice Standards

a. The permittee shall not, at any time, operate Main Boiler No. 1 unless the subject boiler, including the low NOx concentric firing system II, is properly operated and maintained according to good engineering and air pollution control practices. (RACT Order No. 217, Conditions 1.1 and 1.6, issued March 8, 1996; §2105.06; §2105.03)

b. All air pollution control equipment required by this Article or any permit or order under this Article, and all equivalent compliance techniques which have been approved by the Department pursuant to this Article, shall be properly installed, calibrated maintained, and operated consistent with good air pollution control practice. (§2105.03, IP No. 0054-I004b Condition V.A.6.a)

c. The permittee shall take corrective action if an out of control period occurs to a monitoring system (e.g., continuous emission monitor). (40 CFR §75.24, Article XXI §2103.22.j, §2103.50, IP No. 0054-I004b Condition V.A.6.b)

d. The failure to install and operate any continuous emissions monitoring system required by §2108.03 within the time specified, the failure to retain any data or submit any report so required, or the knowing retention or reporting of false data shall be a violation of this permit giving rise to the remedies provided by (§2109.02, §2108.03.f, IP No. 0054-I004b Condition V.A.6.c)


a. Designated representative requirements. The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.413 through 97.418.

b. Emissions monitoring, reporting, and recordkeeping requirements.
   1) The owners and operators, and the designated representative, of each TR NOx Annual source and each TR NOx Annual unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.430 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.431 (initial monitoring system certification and recertification procedures), 97.432 (monitoring system out-of-control periods), 97.433 (notifications concerning monitoring), 97.434 (recordkeeping and reporting, including monitoring plans,
certification applications, quarterly reports, and compliance certification), and 97.435 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

2) The emissions data determined in accordance with 40 CFR 97.430 through 97.435 shall be used to calculate allocations of TR NOx Annual allowances under 40 CFR 97.411(a)(2) and (b) and 97.412 and to determine compliance with the TR NOx Annual emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.430 through 97.435 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

c. NOx emissions requirements.

1) TR NOx Annual emissions limitation.

a) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NOx Annual source and each TR NOx Annual unit at the source shall hold, in the source’s compliance account, TR NOx Annual allowances available for deduction for such control period under 40 CFR 97.424(a) in an amount not less than the tons of total NOx emissions for such control period from all TR NOx Annual units at the source.

b) If total NOx emissions during a control period in a given year from the TR NOx Annual units at a TR NOx Annual source are in excess of the TR NOx Annual emissions limitation set forth in paragraph (c)(1)(i) above, then:

   1) The owners and operators of the source and each TR NOx Annual unit at the source shall hold the TR NOx Annual allowances required for deduction under 40 CFR 97.424(d); and

   2) The owners and operators of the source and each TR NOx Annual unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.

2) TR NOx Annual assurance provisions.

a) If total NOx emissions during a control period in a given year from all TR NOx Annual units at TR NOx Annual sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative’s share of such NOx emissions during such control period exceeds the common designated representative’s assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR NOx Annual allowances available for deduction for such control period under 40 CFR 97.425(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.425(b), of multiplying-{A) The quotient of the amount by which the common designated representative’s share of such NOx emissions exceeds the common designated representative’s assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative’s share of such NOx emissions exceeds the respective common designated representative’s assurance level; and

   B) The amount by which total NOx emissions from all TR NOx Annual units at TR NOx Annual sources in the state for such control period exceed the state assurance level.
b) (ii). The owners and operators shall hold the TR NOX Annual allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

c) (iii). Total NOX emissions from all TR NOX Annual units at TR NOX Annual sources in the State during a control period in a given year exceed the state assurance level if such total NOX emissions exceed the sum, for such control period, of the state NOx Annual trading budget under 40 CFR 97.410(a) and the state's variability limit under 40 CFR 97.410(b).

d) (iv). It shall not be a violation of 40 CFR part 97, subpart AAAAA or of the Clean Air Act if total NOX emissions from all TR NOx Annual units at TR NOx Annual sources in the State during a control period exceed the state assurance level or if a common designated representative's share of total NOX emissions from the TR NOx Annual units at TR NOx Annual sources in the state during a control period exceeds the common designated representative's assurance level.

e) (v). To the extent the owners and operators fail to hold TR NOX Annual allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above, 

i) (A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

ii) (B). Each TR NOX Annual allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each of such of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.

3) (3) Compliance periods.

a) (i). A TR NOX Annual unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015, or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.

b) (ii). A TR NOX Annual unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting " the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.

4) (4) Vintage of allowances held for compliance.

a) (i). A TR NOx Annual allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR NOx Annual allowance that was allocated for such control period or a control period in a prior year.

b) (ii). A TR NOx Annual allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a TR NOx Annual allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

5) (5) Allowance Management System requirements. Each TR NOx Annual allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart AAAAA.

6) (6) Limited authorization. A TR NOx Annual allowance is a limited authorization to emit one ton of NOx during the control period in one year. Such authorization is limited in its use and duration as follows:

a) (i). Such authorization shall only be used in accordance with the TR NOx Annual Trading Program; and

b) (ii). Notwithstanding any other provision of 40 CFR part 97, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the
Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

7) (7) Property right. A TR NOx Annual allowance does not constitute a property right.

d. (d) Title V permit revision requirements.
1) (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR NOx Ozone Season allowances in accordance with 40 CFR part 97, subpart AAAA.
2) (2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.430 through 97.435, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.406(d)(2) and 70.7(e)(2)(i)B or 71.7(e)(1)(i)B.

c. (c) Additional recordkeeping and reporting requirements.
1) (1) Unless otherwise provided, the owners and operators of each TR NOx Annual source and each TR NOx Annual unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
   a) The certificate of representation under 40 CFR 97.416 for the designated representative for the source and each TR NOx Annual unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.416 changing the designated representative.
   b) All Emissions monitoring information, in accordance with 40 CFR Part 97, subpart AAAA.
   c) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR NOx Annual Trading Program.
2) (2) The designated representative of a TR NOx Annual source and each TR NOx Annual unit at the source shall make all submissions required under the TR NOx Annual Trading Program, except as provided in 40 CFR 97.418. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

f. (f) Liability.
1) (1) Any provision of the TR NOx Ozone Season Trading Program that applies to a TR NOx Ozone Season source or the designated representative of a TR NOx Ozone Season source shall also apply to the owners and operators of such source and of the TR NOx Ozone Season units at the source.
2) (2) Any provision of the TR NOx Ozone Season Trading Program that applies to a TR NOx Ozone Season unit or the designated representative of a TR NOx Ozone Season unit shall also apply to the owners and operators of such unit.

g. (g) Effect on other authorities. No provision of the TR NOx Annual Trading Program or exemption
under 40 CFR 97.405 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR NOx Annual source or TR NOx Annual unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.


a. (a) Designated representative requirements. The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.513 through 97.518

b. (b) Emissions monitoring, reporting, and recordkeeping requirements.
   1) (1) The owners and operators, and the designated representative, of each TR NOx Ozone Season source and each TR NOx Ozone Season unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.530 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.531 (initial monitoring system certification and recertification procedures), 97.532 (monitoring system out-of-control periods), 97.533 (notifications concerning monitoring), 97.534 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.535 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
   2) (2) The emissions data determined in accordance with 40 CFR 97.530 through 97.535 shall be used to calculate allocations of TR NOx Ozone Season allowances under 40 CFR 97.511 (a)(2) and (b) and 97.512 and to determine compliance with the TR NOx Ozone Season emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.530 through 97.535 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

c. (c) NOx emissions requirements.
   1) (1) TR NOx Ozone Season emissions limitation.
      a) (i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NOx Ozone Season source and each TR NOx Ozone Season unit at the source shall hold, in the source's compliance account, TR NOx Ozone Season allowances available for deduction for such control period under 40 CFR 97.524(a) in an amount not less than the tons of total NOx emissions for such control period from all TR NOx Ozone Season units at the source.
      b) (ii). If total NOx emissions during a control period in a given year from the TR NOx Ozone Season units at a TR NOx Ozone Season source are in excess of the TR NOx Ozone Season emissions limitation set forth in paragraph (c)(1)(i) above, then:
         i) (A). The owners and operators of the source and each TR NOx Ozone Season unit at the source shall hold the TR NOx Ozone Season allowances required for deduction under 40 CFR 97.524( d); and
         ii) (B). The owners and operators of the source and each TR NOx Ozone Season unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of
40 CFR part 97, subpart BBBBBB and the Clean Air Act.

2) (2) TR NO\textsubscript{X} Ozone Season assurance provisions.
   a) (i) If total NO\textsubscript{X} emissions during a control period in a given year from all TR NO\textsubscript{X} Ozone Season units at TR NO\textsubscript{X} Ozone Season sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO\textsubscript{X} emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR NO\textsubscript{X} Ozone Season allowances available for deduction for such control period under 40 CFR 97.525(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.525(b), of multiplying
      i) (A). The quotient of the amount by which the common designated representative's share of such NO\textsubscript{X} emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NO\textsubscript{X} emissions exceeds the respective common designated representative's assurance level, and
      ii) (B). The amount by which total NO\textsubscript{X} emissions from all TR NO\textsubscript{X} Ozone Season units at TR NO\textsubscript{X} Ozone Season sources in the state for such control period exceed the state assurance level.
   b) (ii). The owners and operators shall hold the TR NO\textsubscript{X} Ozone Season allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
   c) (iii). Total NO\textsubscript{X} emissions from all TR NO\textsubscript{X} Ozone Season units at TR NO\textsubscript{X} Ozone Season sources in the state during a control period in a given year exceed the state assurance level if such total NO\textsubscript{X} emissions exceed the sum, for such control period, of the State NO\textsubscript{X} Ozone Season trading budget under 40 CFR 97.510(a) and the state's variability limit under 40 CFR 97.510(b).
   d) (iv). It shall not be a violation of 40 CFR part 97, subpart BBBBBB or of the Clean Air Act if total NO\textsubscript{X} emissions from all TR NO\textsubscript{X} Ozone Season units at TR NO\textsubscript{X} Ozone Season sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total NO\textsubscript{X} emissions from the TR NO\textsubscript{X} Ozone Season units at TR NO\textsubscript{X} Ozone Season sources in the state during a control period exceeds the common designated representative's assurance level.
   e) (v). To the extent the owners and operators fail to hold TR NO\textsubscript{X} Ozone Season allowances for a control period in a given year in accordance with paragraphs (c )(2)(i) through (iii) above,
      i) (A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
      ii) (B). Each TR NO\textsubscript{X} Ozone Season allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c )(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart BBBBBB and the Clean Air Act.

3) (3) Compliance periods.
   a) (i). A TR NO\textsubscript{X} Ozone Season unit shall be subject to the requirements under paragraph (c)(l) above for the control period starting on the later of May 1, 2015 or the deadline for
meeting the unit's monitor certification requirements under 40 CFR 97.530(b) and for each control period thereafter.

b) (ii). A TR NO\textsubscript{X} Ozone Season unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.530(b) and for each control period thereafter.

4) (4) Vintage of allowances held for compliance.

a) (i). A TR NO\textsubscript{X} Ozone Season allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR NO\textsubscript{X} Ozone Season allowance that was allocated for such control period or a control period in a prior year.

b) (ii). A TR NO\textsubscript{X} Ozone Season allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a TR NO\textsubscript{X} Ozone Season allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

5) (5) Allowance Management System requirements. Each TR NO\textsubscript{X} Ozone Season allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart BBBBB.

6) (6) Limited authorization. A TR NO\textsubscript{X} Ozone Season allowance is a limited authorization to emit one ton of NO\textsubscript{X} during the control period in one year. Such authorization is limited in its use and duration as follows:

a) (i). Such authorization shall only be used in accordance with the TR NO\textsubscript{X} Ozone Season Trading Program; and

b) (ii). Notwithstanding any other provision of 40 CFR part 97, subpart BBBBB, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

7) (7) Property right. A TR NO\textsubscript{X} Ozone Season allowance does not constitute a property right.

d. (d) Title V permit revision requirements.

1) (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR NO\textsubscript{X} Ozone Season allowances in accordance with 40 CFR part 97, subpart BBBBB.

2) (2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.530 through 97.535, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.506(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(I)(B).

e. (e) Additional recordkeeping and reporting requirements.

1) (I) Unless otherwise provided, the owners and operators of each TR NO\textsubscript{X} Ozone Season source and each TR NO\textsubscript{X} Ozone Season unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

a) The certificate of representation under 40 CFR 97.516 for the designated representative for
the source and each TR NOx Ozone Season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.516 changing the designated representative.

b) All Emissions monitoring information, in accordance with 40 CFR Part 97, subpart BBBB.

c) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR NOx Annual Trading Program.

2) The designated representative of a TR NOx Ozone Season source and each TR NOx Ozone Season unit at the source shall make all submissions required under the TR NOx Ozone Season Trading Program, except as provided in 40 CFR 97.518. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

f. Liability.

1) Any provision of the TR NOx Ozone Season Trading Program that applies to a TR NOx Ozone Season source or the designated representative of a TR NOx Ozone Season source shall also apply to the owners and operators of such source and of the TR NOx Ozone Season units at the source.

2) Any provision of the TR NOx Ozone Season Trading Program that applies to a TR NOx Ozone Season unit or the designated representative of a TR NOx Ozone Season unit shall also apply to the owners and operators of such unit.

g. Effect on other authorities. No provision of the TR NOx Ozone Season Trading Program or exemption under 40 CFR 97.505 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR NOx Ozone Season source or TR NOx Ozone Season unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.


a. Designated representative requirements. The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.613 through 97.618.

b. Emissions monitoring, reporting, and recordkeeping requirements.

1) The owners and operators, and the designated representative, of each TR SO2 Group 1 source and each TR SO2 Group 1 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.630 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.631 (initial monitoring system certification and recertification procedures), 97.632 (monitoring system out-of-control periods), 97.633 (notifications concerning monitoring), 97.634 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.635 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

2) The emissions data determined in accordance with 40 CFR 97.630 through 97.635 shall be
used to calculate allocations of TR SO2 Group 1 allowances under 40 CFR 97.611(a)(2) and (b) and 97.612 and to determine compliance with the TR SO2 Group 1 emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.630 through 97.635 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

c. (c) SO2 emissions requirements. 97.618.
   1) (1) TR SO2 Group 1 emissions limitation.
      a) (i) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR SO2 Group 1 source and each TR SO2 Group 1 unit at the source shall hold, in the source's compliance account, TR SO2 Group 1 allowances available for deduction for such control period under 40 CFR 97.624(a) in an amount not less than the tons of total SO2 emissions for such control period from all TR SO2 Group 1 units at the source.
      b) (ii). If total SO2 emissions during a control period in a given year from the TR SO2 Group 1 units at a TR SO2 Group 1 source are in excess of the TR SO2 Group 1 emissions limitation set forth in paragraph (c)(1)(i) above, then:
         i) (A). The owners and operators of the source and each TR SO2 Group 1 unit at the source shall hold the TR SO2 Group 1 allowances required for deduction under 40 CFR 97.624(d); and
         ii) (B). The owners and operators of the source and each TR SO2 Group 1 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation 40 CFR part 97, subpart CCCCC and the Clean Air Act.

2) (2) TR SO2 Group 1 assurance provisions.
   a) (i). If total SO2 emissions during a control period in a given year from all TR SO2 Group 1 units at TR SO2 Group 1 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such SO2 emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR SO2 Group 1 allowances available for deduction for such control period under 40 CFR 97.625(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.625(b), of multiplying
      i) (A). The quotient of the amount by which the common designated representative's share of such SO2 emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such SO2 emissions exceeds the respective common designated representative's assurance level; and
      ii) (B). The amount by which total SO2 emissions from all TR SO2 Group 1 units at TR SO2 Group 1 sources in the state for such control period exceed the state assurance level.
b) (ii). The owners and operators shall hold the TR SO2 Group 1 allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

c) (iii). Total SO2 emissions from all TR SO2 Group 1 units at TR SO2 Group 1 sources in the state during a control period in a given year exceed the state assurance level if such total SO2 emissions exceed the sum, for such control period, of the state SO2 Group 1 trading budget under 40 CFR 97.610(a) and the state’s variability limit under 40 CFR 97.610(b).

d) (iv). It shall not be a violation of 40 CFR part 97, subpart CCCCC of the Clean Air Act if total SO2 emissions from all TR SO2 Group 1 units at TR SO2 Group 1 sources in the state during a control period exceed the state assurance level or if a common designated representative’s share of total SO2 emissions from the TR SO2 Group 1 units at TR SO2 Group 1 sources in the state during a control period exceeds the common designated representative’s assurance level.

e) (v). To the extent the owners and operators fail to hold TR SO2 Group 1 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

i) (A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

ii) (B). Each TR SO2 Group 1 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart CCCCC and the Clean Air Act.

3) (3) Compliance periods.

a) (i). A TR SO2 Group 1 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015 or the deadline for meeting the unit’s monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.

b) (ii). A TR SO2 Group 1 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit’s monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.

4) (4) Vintage of allowances held for compliance.

a) (i). A TR SO2 Group 1 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR SO2 Group 1 allowance that was allocated for such control period or a control period in a prior year.

b) (ii). A TR SO2 Group 1 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a TR SO2 Group 1 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

5) (5) Allowance Management System requirements. Each TR SO2 Group 1 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart CCCCC.

6) (6) Limited authorization. A TR SO2 Group 1 allowance is a limited authorization to emit one ton of SO2 during the control period in one year. Such authorization is limited in its use and duration as follows:

a) (i). Such authorization shall only be used in accordance with the TR SO2 Group 1 Trading Program; and

b) (ii). Notwithstanding any other provision of 40 CFR part 97, subpart CCCCC, the Administrator has the authority to terminate or limit the use and duration of such
authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

7) (7) Property right. A TR SO2 Group 1 allowance does not constitute a property right.

d) (d) Title V permit revision requirements.

1) (1) No Title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR SO2 Group 1 allowances in accordance with 40 CFR part 97, subpart CCCCC.

2) (2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.630 through 97.635, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendixes D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR part 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.606(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

e) (e) Additional recordkeeping and reporting requirements.

1) (1) Unless otherwise provided, the owners and operators of each TR SO2 Group 1 source and each TR SO2 Group 1 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

a) (i). The certificate of representation under 40 CFR 97.616 for the designated representative for each TR SO2 Group 1 source and each TR SO2 Group 1 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.616 changing the designated representative.

b) (ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart CCCCC.

c) (iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR SO2 Group 1 Trading Program.

2) (2) The designated representative of each TR SO2 Group 1 source and each TR SO2 Group 1 unit at the source shall make all submissions required under the TR SO2 Group 1 Trading Program, except as provided in 40 CFR 97.618. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a Title V operating permit program in 40 CFR parts 70 and 71.

f) (f) Liability.

1) (1) Any provision of the TR SO2 Group 1 Trading Program that applies to a TR SO2 Group 1 source or the designated representative of a TR SO2 Group 1 source shall also apply to the owners and operators of such source and of the TR SO2 Group 1 units at the source.

2) (2) Any provision of the TR SO2 Group 1 Trading Program that applies to a TR SO2 Group 1 unit or the designated representative of a TR SO2 Group 1 unit shall also apply to the owners and operators of such unit.

g) (g) Effect on other authorities. No provision of the TR SO2 Group 1 Trading Program or exemption
under 40 CFR 97.605 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR SO2 Group 1 source or TR SO2 Group 1 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

10. NOX Emissions Averaging Plan

a. 25 Pa. Code §129.98 - Facility-wide or system-wide NOx emissions averaging plan general requirements.

1) (a) The owner or operator of a major NOx-emitting facility subject to 25 Pa. Code §129.96 (relating to applicability) that includes at least one air contamination source subject to a NOx RACT emission limitation in 25 Pa. Code §129.97 (relating to presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule) that cannot meet the applicable NOx RACT emission limitation may elect to meet the applicable NOx RACT emission limitation in 25 Pa. Code §129.97 by averaging NOx emissions on either a facility-wide or system-wide basis using a 30-day rolling average. System-wide emissions averaging must be among sources under common control of the same owner or operator within the same ozone nonattainment area in this Commonwealth. [NOTE: THE NRG CHESWICK STATION AND THE NRG BRUNOT ISLAND STATION ARE BOTH UNDER COMMON OWNERSHIP. THE BOILERS INCLUDED IN THE SYSTEM-WIDE NOX EMISSIONS AVERAGING PLAN ARE THE MAIN BOILER NO. 1 AT CHESWICK AND COMBUSTION TURBINE 1A AT BRUNOT ISLAND.]

2) (b) The owner or operator of each facility that elects to comply with part (a), above, shall submit a written NOx emissions averaging plan to the Department or appropriate approved local air pollution control agency as part of an application for an operating permit modification or a plan approval, if otherwise required. The application incorporating the requirements of this section (25 Pa. Code §129.98) shall be submitted by the applicable date as follows: (1) October 24, 2016, for a source subject to 25 Pa. Code §129.96(a).

3) (c) Each NOx air contamination source included in the application for an operating permit modification or a plan approval, if otherwise required, for averaging NOx emissions on either a facility-wide or system-wide basis using a 30-day rolling average submitted under part (b), above, must be an air contamination source subject to a NOx RACT emission limitation in 25 Pa. Code §129.97.

4) (d) The application for the operating permit modification or the plan approval, if otherwise required, for averaging NOx emissions on either a facility-wide or system-wide basis using a 30-day rolling average submitted under part (b), above, must demonstrate that the aggregate NOx emissions emitted by the air contamination sources included in the facility-wide or system-wide NOx emissions averaging plan using a 30-day rolling average are not greater than the NOx emissions that would be emitted by the group of included sources if each source complied with the applicable NOx RACT emission limitation in 25 Pa. Code §129.97 on a source-specific basis.

5) (e) The owner or operator shall calculate the alternative facility-wide or system-wide NOx RACT emissions limitation using a 30-day rolling average for the air contamination sources included in the application for the operating permit modification or plan approval, if otherwise required, submitted under part (b), above, by using the following equation to sum the emissions for all of the sources included in the NOx emissions averaging plan:

\[ \sum_{n=1}^{i} (\text{Eactual}) \leq \sum_{n=1}^{i} (\text{Eallowable}) \] {Equation 2}

Where:

\[ \sum \] = Symbol used to denote summation,
n = The number of air contamination sources included in the NOx emissions averaging plan.

Eiactual = The actual NOx mass emissions, including emissions during startups, shutdowns and malfunctions, for air contamination source "i" on a 30-day rolling basis. The symbol "<=" means "less than or equal to".

Eiallowable = The allowable NOx mass emissions computed using the allowable emission rate limitations for air contamination source "i" on a 30-day rolling basis specified in 25 Pa. Code §129.97. If an air contamination source included in an averaging plan is subject to a numerical emission rate limit that is more stringent than the applicable allowable emission rate limitation in 25 Pa. §129.97, then the numerical emission rate limit shall be used for the calculation of the allowable NOx mass emissions.

6) (f) The application for the operating permit modification or a plan approval, if otherwise required, specified in parts (b)-(e), above, may include facility-wide or system-wide NOx emissions averaging using a 30-day rolling average only for NOx-emitting sources or NOx-emitting facilities that are owned or operated by the applicant.

7) (j) The owner or operator of an air contamination source or facility included in the facility-wide or system-wide NOx emissions averaging plan submitted in accordance with parts (b)-(h), above, shall submit the reports and records specified in 25 Pa. Code §129.98(g)(3) to the Department or appropriate approved local air pollution control agency on the schedule specified in 25 Pa. Code §129.98(g)(3) to demonstrate compliance with 25 Pa. Code §129.100.

8) (k) The owner or operator of an air contamination source or facility included in a facility-wide or system-wide NOx emissions averaging plan submitted in accordance with parts (b)-(h), above, that achieves emission reductions in accordance with other emission limitations required under the act or the Clean Air Act, or regulations adopted under the act or the Clean Air Act, that are not NOx RACT emission limitations may not substitute those emission reductions for the emission reductions required by the facility-wide or system-wide NOx emissions averaging plan submitted to the Department or appropriate approved local air pollution control agency under part (b), above.

9) (l) The owner or operator of an air contamination source subject to a NOx RACT emission limitation in 25 Pa. Code §129.97 that is not included in a facility-wide or system-wide NOx emissions averaging plan submitted under part (b), above, shall operate the source in compliance with the applicable NOx RACT emission limitation in 25 Pa. Code §129.97.

10) (m) The owner and operator of the air contamination sources included in a facility-wide or system-wide NOx emissions averaging plan submitted under part (b), above, shall be liable for a violation of an applicable NOx RACT emission limitation at each source included in the NOx emissions averaging plan.

b. 25 Pa. Code §129.97 - Presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule.

a) (a) Each Group 012 boiler shall not combust No. 2 fuel oil in an amount equal to or greater than 1% of its annual (i.e., calendar year) fuel consumption on a heat input basis in order to maintain the exemption provided in 25 Pa. Code §129.97(g)(4)(ii).

b) (b) The permittee shall keep records to demonstrate compliance with part (a), above, pursuant to 25 Pa. Code §129.100(d).

c. 25 Pa. Code §129.100 – Compliance demonstration and recordkeeping requirements.

a) (d) The owner and operator of an air contamination source subject to this section (25 Pa. Code §129.100) and 25 Pa. Code §§129.96 - 129.99 shall keep records to demonstrate compliance with 25 Pa. Code §§129.96 - 129.99 in the following manner:
i) (1) The records must include sufficient data and calculations to demonstrate that the requirements of 25 Pa. Code §§129.96 - 129.99 are met.
   (1) (2) Data or information required to determine compliance shall be recorded and maintained in a time-frame consistent with the averaging period of the requirement.

b) (i) The records shall be retained by the owner or operator for five (5) years and made available to the Department or appropriate approved local air pollution control agency upon receipt of a written request from the Department or appropriate approved local air pollution control agency.

d. 25 Pa. Code §129.98 – Facility-wide or system-wide NOx emissions averaging plan general requirements.

1) (a) Calculation of the Actual NOx Mass Emissions (Eiactual)

a) (1) Calculate the daily actual NOx mass emissions for each boiler* addressed in the system-wide NOx emissions averaging plan for each day that at least one of the five boilers operates by summing the hourly NOx mass emissions using the NOx CEMS. The daily actual NOx mass emissions must include the emissions that occur during the entire operating day, including emissions from start-ups, shutdowns and malfunctions. Each day that at least one of the five boilers operates shall be defined as a "system-wide operating day".

b) (2) The 30-day rolling actual NOx mass emissions for each boiler* addressed in the system-wide NOx emissions averaging plan is calculated by summing the actual NOx mass emissions for the current system-wide operating day and the previous 29 system-wide operating days.

c) (3) The 30-day rolling system-wide actual NOx mass emissions (Eiactual) are calculated by summing the actual NOx mass emissions of all five boilers addressed in the system-wide NOx emissions averaging plan for the current systemwide operating day and the previous 29 system-wide operating days.

d) (4) The 30-day rolling system-wide actual NOx mass emissions (Eiactual) shall be calculated for each consecutive system-wide operating day in the data acquisition handling system (DAHS) associated with the NOx CEMS at the facility.

e) (5) The permittee shall utilize 40 CFR Part 75 data substitution procedures for invalid data for hourly NOx (lbs/hr) and heat input (mmBTU/hr).

2) (b) Calculation of the Allowable NOx Emissions (Eiallowable)

a) (1) For the NRG Cheswick Main Boiler No 1, the following equation (Equation 3) will be used to calculate Daily EallowableM:

\[
\text{Daily EallowableM} = \frac{\sum_{i=1}^{n} (Z(C1) + (X)(C2))}{2000} \quad \{\text{Equation 3}\}
\]

Where:
Daily EallowableM = The daily allowable NOx mass emissions for the NRG Cheswick Main Boiler No. 1 computed using the allowable emission rate limitations for air contamination source "i" specified in 25 Pa. Code §129.97, expressed in units of tons,
\(\sum\) = Symbol used to denote summation,
\(n\) = The number of different NOx CEMS located at NRG Cheswick Main Boiler No. 1 = 1,
\(Z = 0.12\) lb NOx/mmBTU,
C1 = The daily total heat input for operation when SCR inlet T >= 600°F, expressed in units of mmBTU,
X = 0.35 lb NOx/mmBTU.
C2 = The daily total heat input for operation when SCR inlet T < 600°F, expressed in units of mmBTU.
The symbol "/" means "divided by".
The symbol "\textgreater\textless" means "greater than or equal to".
The daily heat inputs (C1 & C2) shall be determined using fuel F-factors pursuant to 40 CFR Part 75, Appendix F, 40 CFR Part 60, and Appendix A, Method 19. This data shall be maintained in the NOx CEMS DAHS. The SCR inlet temperature shall be continuously monitored for each boiler.
b) (2) For the Brunot Island Combustion Turbine 1A, the following equation (Equation 4) will be used to calculate Daily EallowableBI:
Daily EallowableBI = \{\sum_{i=1}^{n} (Y)(FO)\} / 2000 \{\text{Equation 3}\}
Where:
Daily EallowableBI = The daily allowable NOx mass emissions for the Brunot Island Combustion Turbine 1A computed using the allowable emission rate limitations for air contamination source "i" specified in 25 Pa. Code §129.97, expressed in units of tons,
C = Symbol used to denote summation,
\text{n} = The number of different NOx CEMS located at Cheswick Main Boiler No. 1 = 1,
FO = The daily total heat input for No. 2 Fuel Oil, expressed in units of mmBTU,
Y = 0.12 lb NOx/mmBTU.
The symbol "/" means "divided by".
The daily heat inputs (C & NG) shall be determined using fuel F-factors pursuant to 40 CFR Part 75, Appendix F, 40 CFR Part 60, Appendix A, Method 19, and a fuel flow meter for natural gas (NG). This data shall be maintained in the NOx CEMS DAHS.
c) (3) The following equation (Equation 5) will be used to calculate Daily Eallowable:
i) Daily Eallowable = Daily EallowableBI + Daily EallowableM \{\text{Equation 5}\}
d) (4) The 30-day rolling system-wide allowable NOx mass emissions (Eallowable) are calculated by summing the allowable NOx mass emissions for the Cheswick Main Boiler No. 1 and Brunot Island Combustion Turbine 1Afmou for the current system-wide operating day (Daily Eallowable) and the previous 29 system-wide operating days.
e) (5) The 30-day rolling system-wide allowable NOx mass emissions (Eallowable) shall be calculated for each consecutive system-wide operating day in the data acquisition handling system (DAHS) associated with the NOx CEMS at the facility.
3) (c) Comparison of Eactual to Eallowable
a) (1) Beginning on January 1, 2017, the permittee shall demonstrate compliance with the alternative system-wide NOx RACT emissions limitation of Condition #002(e) [25 Pa. Code §129.98(e)], above, using a 30-day rolling average by comparing Eactual to Eallowable.
b) (2) For each 30-day rolling period in which Eactual exceeds Eallowable, the permittee shall be liable for a violation of the applicable NOx RACT emission limitation at each of the five boilers included in the system-wide NOx emissions averaging plan pursuant to 25 Pa. Code §129.98(m).
c. 25 Pa. Code §129.98 – Facility-wide or system-wide NOx emissions averaging plan general requirements.
1) (a) Beginning with the first quarter of calendar year 2018, the permittee shall submit quarterly RACT system-wide NOx emissions averaging reports to the Department. The permittee shall
also submit a copy of each quarterly RACT system-wide NOx emissions averaging report described in this operating permit condition along with the quarterly CEMS reports.

2) (b) The permittee's demonstration of compliance with the system-wide NOx emissions limit of Condition #002(e) [25 Pa. Code §129.98(e)], above, shall be included in the quarterly RACT system-wide NOx emissions averaging report.

3) (c) The permittee's demonstration of compliance with the annual No. 2 fuel oil combustion limit shall be included in the quarterly RACT system-wide NOx emissions averaging report.

4) (d) The quarterly RACT system-wide NOx emissions averaging reports shall be submitted according to the following schedule:
   a) (1) The quarterly report for the period of January 1 - March 31 is due no later than April 30.
   b) (2) The quarterly report for the period of April 1 - June 30 is due no later than July 30.
   c) (3) The quarterly report for the period of July 1 - September 30 is due no later than October 30.
   d) (4) The quarterly report for the period of October 1 - December 31 is due no later than January 30.

5) (e) The permittee may request, in writing, an extension of time from the Department for the filing of a quarterly RACT systemwide NOx emissions averaging report specified in part (a), above, and the Department may grant, in writing, the extension for reasonable cause.
B. Auxiliary Boiler, Stack No. 2

Process Description: Oil-fired external combustion boiler
Facility ID: Auxiliary Boiler
Capacity: 160 MMBtu/hr
Fuel(s): No. 2 Fuel Oil, 0.05% (wt.) sulfur content
Control Device: None

1. Restrictions:

   a. Particulate matter (PM) emissions from the Auxiliary Boiler shall not exceed 0.015 lb/MMBTU. (§2104.02.a.1.B)

   b. Sulfur dioxide (SO₂) emissions from the Auxiliary Boiler shall not exceed the allowable emissions A (in lb/MMBTu) calculated by the formula A = 1.7E⁻⁰¹⁴, where E = actual heat input in MMBtu/hr (§2104.03.a.2.B)

   c. The permittee shall limit the heat input rate to the Auxiliary Boiler to less than 140,160 MMBtu per twelve (12) consecutive month period (10 percent annual capacity factor). (§2103.12.a.2.B, §2105.06.b, §63.7575)

   d. All fuel oil purchased by the permittee beginning July 1, 2016 for the Auxiliary Boiler shall meet ASTM specifications for No.2 fuel oil and have a maximum sulfur content at or less than 0.05% by weight at all times. (§2103.12.h.1, Permit No. 106509-003-00600, issued May 2, 1995; PA Code 25 123.22(d)(2)(i)).

   e. Emissions from the Auxiliary Boiler shall not exceed the limitations in Table V.B.1 below at any time: (§2103.12.a.2.B, §2105.06.d.2, Permit No. 106509-003-00600, issued May 2, 1995)

   ![TABLE V.B.1 Auxiliary Boiler Emission Limitations](image)

   * A year is defined as any consecutive 12-month period.

2. Testing Requirements:

   a. The permittee shall perform nitrogen oxides emissions testing on the Auxiliary Boiler at least once every five years in order to demonstrate compliance with the emission limitations of this permit.
Such testing shall be conducted in accordance with U.S. EPA test method 7E or an alternative method approved by the Department and Article XXI §2108.02. (§2103.12.h.1; §2108.02.b, §2108.02.e.)

b. Unless specifically requested in writing by the Department, emissions testing on the Auxiliary Boiler specified in Condition V.B.2.a above is not required until the unit has operated 876 hours during any 12 consecutive months. (§2103.12.h.1)

c. The Department reserves the right to require any additional emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing, if required, shall be performed in accordance with Article XXI §2108.02 and Site Level Condition IV.13 above entitled “Emissions Testing.” (§2103.12.h.1)


The permittee shall operate and maintain a fuel flow meter to monitor the amount of fuel oil combusted in the Auxiliary Boiler. (§2103.12.i)

4. Record Keeping Requirements (§§2103.12.j & k):

a. The permittee shall maintain all appropriate records to demonstrate compliance with the requirements of both Section 2105.06 Article XXI, and conditions V.B.1.c and V.B.6.b below. Such records shall provide sufficient data to clearly demonstrate that all requirements of Section 2105.06 of Article XXI, and conditions V.B.1.c and V.B.6.b below, are being met. (§2105.06.g)

b. The permittee shall keep and maintain the following data for the Auxiliary Boiler: (§2103.12.h.1, §63.7525(k)

1) Amount of fuel oil used (daily and 12-month, gallons);
2) Records of fuel oil supplier’s certification of sulfur content, and fuel oil heating value (each shipment received);
3) Total operating hours, (hours/day, monthly and 12-month);
4) Total heat input rate (12-month, MMBtu)
5) Records of operation, maintenance, inspection, calibration and/or replacement of combustion equipment.
6) Stack test protocols and reports.
7) Records of the annual adjustment required by V.B.6.b below.

c. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2103.12.h.1)

d. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. (§2103.12.j.2)

5. Reporting Requirements:

a. The permittee shall report the following information to the Department in accordance with General Condition III.15 above on a semi-annual basis. The reports shall contain all required information for the time period of the report. (§2103.12.k.1)
1) Monthly and 12-month data required to be recorded by condition V.B.4.b above;
2) A statement from the permittee that the record of fuel supplier certifications required by condition V.B.4.b above represents all the fuel oil received during the reporting period; and
3) Non-compliance information required to be recorded by V.B.4.c above.

b. Reporting instances of non-compliance in accordance with condition V.B.5.a above does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. (§2105.12.k.1)

6. Work Practice Standards
   a. The permittee shall not, at any time, operate the Auxiliary Boiler unless the subject boiler is properly operated and maintained according to good engineering and air pollution control practices. (§2105.03)
   b. The permittee shall conduct a tune-up of the Auxiliary Boiler at least once every 5 years from the date of the last tune-up. (§63.7500(a)(1): Subpart 5D Table 3, Item #1)

“PERMIT SHIELD” IN EFFECT.
C. Process Equipment: Ammonia Storage Tanks

Process Description: Four 42,000 gallon storage tanks
Raw Material(s)/Fuel(s): Aqueous Ammonia (19%)
Control Device: Vapor balancing and bottom loading

1. Restrictions:

The storage tanks shall not be loaded or unloaded unless the vapor balancing system is in place and operating properly according to manufacturer’s specifications at all times during the operation. (IP No. 0054-I002, Condition V.B.1, issued June 13, 2001)

2. Testing Requirements:

The Department reserves the right to require any additional emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing, if required, shall be performed in accordance with Article XXI §2108.02 and Site Level Condition IV.13 above entitled “Emissions Testing.” (§2103.12.h.1)


The storage tanks and vapor balance system shall be inspected monthly to assure structural integrity of the tanks and that no leaks are present. (IP No.0054-I002, Condition V.B.3, issued June 13, 2001)

4. Record Keeping Requirements (§2103.12.j):

Records shall be kept of monthly throughput and the results of the inspections required by V.C.3 above. (IP No.0054-I002, Condition V.B.4, issued June 13, 2001)

5. Reporting Requirements (§2103.12.k):

Reports of monthly throughput shall be provided to the Department on an annual basis. (IP No.0054-I002, Condition V.B.5, issued June 13, 2001)

6. Work Practice Standards (§2105.03)

The permittee shall calibrate, maintain, and operate all instrumentation, process equipment, and control equipment according to manufacturers’ recommendations and good engineering practices. (§2105.03)

“PERMIT SHIELD” IN EFFECT.
D. Process Equipment: Coal Handling and Storage

Process Description: Coal barge unloading, coal conveying, pile maintenance and storage, indoor storage, and crushing operations

Capacity: Unloading = 1800 tons/hr; Conveying = 600 tons/hr each

Control Method: Fugitive dust control measures

1. Restrictions:
   a. The permittee shall conduct coal handling operations in a manner such that emissions from these operations are not visible at or beyond the facility property line at any time. (§2104.05)
   
   b. Particulate matter emissions from coal crushing, grinding, or screening shall not at any time exceed the rate determined by the following formula (§2104.02.c):

   \[ A \text{ (lb/hr)} = 0.76E^{0.42}, \]

   where \( E \) = emission index = \( (F) \times (W) \)
   \( F = \text{20 lbs/ton feed} \)
   \( W = \text{charge rate (tons/hr)} \)

   c. Unless the ambient temperature is 32°F or below, the permittee shall ensure that the coal handling operations, including material handling and storage pile wet suppression systems, are in operation and control emissions in accordance with the Fugitive Dust Emissions Control Plan submitted to the Department, as follows: (§2105.49)

   1) Barge Unloader:
      a) The permittee shall ensure that the barge unloader is properly operated in order to minimize material spillage. The permittee shall ensure prompt clean-up of any spillage at the barge unloading operations upon occurrence.
      b) The permittee shall repair any leaks in chutes and hoppers as necessary.

   2) Crusher Building:
      a) The permittee shall enclose the crusher building to minimize the emissions of fugitive dust to the environment.
      b) The permittee shall ensure prompt clean-up of any spillage at the Crusher Building upon occurrence.
      c) The permittee shall repair any leaks in chutes, hoppers or seals.
      d) The permittee shall minimize operation of unloaded equipment in order to minimize disturbance of loose material, except as needed during freezing temperatures.

   3) Material Conveyors:
      a) Except during maintenance, the permittee shall ensure that all conveyors that are equipped to be covered by canopies are covered by canopy. Upon canopy removal for maintenance, such canopies shall be replaced as soon as possible, and prior to routine conveyor operation.
      b) The permittee shall ensure that scrapers on conveyors are maintained in good operating condition.
      c) The permittee shall inspect all belts and ensure that such are in good operating condition to achieve proper tracking and loading.
d) The permittee shall minimize the operation of unloaded conveyors except as needed during freezing temperatures.

4) Coal Yard:
   a) Plant personnel shall instruct coal trucks to dump as close as practical to the coal storage area.
   b) The permittee shall compact the storage piles as needed.
   c) Plant personnel shall restrict the number of vehicles on the pile to those engaged only in essential plant operations.
   d) Plant personnel shall ensure that all trucks entering the plant are tarped, free of debris and not leaking. Trucks shall be restricted to drive on designated thoroughfares and shall not drive on road shoulders or other restricted plant areas.
   e) Plant personnel shall ensure that all trucks leaving the coal pile are washed as necessary at the on-site truck wash station unless the average ambient temperature is 32°F or lower.
   f) The permittee shall control fugitive particulate emissions from material storage piles through the use of water or water and chemical suppression, as needed.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing, if required, shall be performed in accordance with Article XXI §2108.02 and Site Level Condition IV.13 above entitled “Emissions Testing.” (§2103.12.h.1)


a. Observations of visible emissions from barge unloading, coal conveying, coal pile maintenance and storage, coal tripper room exhaust vents, and coal crusher building vent exhausts shall be performed once per week during normal daylight operations during every week that the units are operating. A trained employee shall record whether any emissions are observed and whether these emissions extend beyond the facility property line.

b. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

4. Record Keeping Requirements (§2103.12.j):

a. The permittee shall keep and maintain the following data for the coal handling and storage equipment (§2103.12.h.1):

1) Coal throughput (tons/day);
2) A daily log of time and location of treated pile areas, identification of dust suppressants if applied, meter readings of spray bar and/or pump or odometer reading of trucks used to apply water and/or dust suppressants, dilution ratios of the dust suppressants and diluent used if chemical suppressants are used, and purchase records of the chemical suppressants, if used.
3) Records of the visible emission notations as required by V.D.3 above;
4) Records of operation, maintenance, inspection, calibration and/or replacement of coal handling and storage equipment.

b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2103.12.h.1)
c. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. (§2103.12.j.2)

5. Reporting Requirements (§2103.12.k):
   a. The permittee shall report the following information to the Department quarterly in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: (§2103.12.k.1)

   1) Coal throughput data required to be recorded by condition V.D.4.a above; and
   2) Non-compliance information required to be recorded by V.D.4.b above.

   b. Reporting instances of non-compliance in accordance with condition V.D.5.a.2) above does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. (§2103.12.k.1)

6. Work Practice Standards
   a. The permittee shall not, at any time, conduct coal handling and storage operations unless all equipment is properly operated and maintained according to good engineering and air pollution control practices. (§2105.03)

   b. If any visible emissions from coal handling and storage operations are observed to extend beyond the facility property line, the permittee shall take reasonable response steps in accordance with the Fugitive Dust Emissions Control Plan submitted to the Department. Failure to take corrective steps shall be considered a deviation from this permit.

   “PERMIT SHIELD” IN EFFECT.
E. Process Equipment: Ash Handling, Processing, and Storage

Process Description: Fly ash handling/processing (vacuum pump discharge vents located inside the boiler building, fly ash silo dust collector, fly ash silo loadout) and bottom ash handling/processing (truck loading/unloading, hopper loading, conveying, stacking, screening, and storage pile wind erosion)

Capacity: Approximately 221,110 tons/yr fly ash; approximately 70,000 tons/yr bottom ash

Control Device: Fabric filters (fly ash vacuum pump discharge vents and fly ash silo dust collector), wet suppression primarily used for fugitive dust control

1. Restrictions:
   a. The permittee shall conduct fly ash and bottom ash handling, processing, and storage operations in a manner such that emissions from these operations are not visible at or beyond the facility property line at any time. (§2104.05)
   b. The permittee shall not cause to be discharged into the atmosphere from either of the two (2) fly ash silo baghouse vents particulate matter emissions in excess of 0.02 grains/dscf at any time. (§2105.03)
   c. The permittee shall ensure that the fly and bottom ash handling operations, including material handling and storage pile wet suppression systems, are in operation and control emissions in accordance with the Fugitive Dust Emissions Control Plan submitted to the Department, as follows: (§2105.49)
      1) Fly Ash Handling:
         a) The permittee shall conduct fly ash load-out operations in such a manner that overfilling of trucks does not occur.
         b) The permittee shall ensure prompt clean-up of any spillage of ash during load-out upon occurrence.
         c) The permittee shall inspect the ash unloaders at least once per week to ensure that the ash is uniformly wet and flow is unimpeded.
         d) Plant personnel shall ensure that all trucks leaving the ash loading area are washed at the on-site truck wash station unless the average ambient temperature is 32°F or lower.
         e) The permittee shall control fugitive particulate emissions from material storage piles, ash load-out, and other ash handling activities through the use of water or water and chemical suppression, as needed.
         f) Plant personnel shall ensure that all trucks leaving the ash loading area are tarped prior to leaving the loading area.
      2) Bottom Ash Processing:
         a) The permittee shall instruct plant operators not to overfill truck beds.
         b) The permittee shall minimize pile inventory.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing, if required, shall be performed in accordance with Site Level Condition IV.13 above entitled “Emissions Testing.” (§2103.12.h.1)
   
a. Observations of visible emissions from the fly ash handling operations (fly ash silo dust collector vents, and fly ash silo loadout) and bottom ash processing operations (truck loading/unloading, hopper loading, conveying, stacking, screening, and wind erosion from storage piles) shall be performed once per week during normal daylight operations during every week that the units are operating. A trained employee shall record whether any emissions are observed and whether these emissions extend beyond the facility property line.

   b. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

   c. An inspection shall be performed each calendar quarter of the dust collectors controlling particulate emissions from the fly ash vacuum pump discharge vents and fly ash silo vents.

4. Record Keeping Requirements (§2103.12.j):
   
a. The permittee shall keep and maintain the following data for the ash handling and storage equipment (§2103.12.h.1):

   1) Fly ash and bottom ash throughput (tons/day);

   2) A daily log of time and location of treated pile areas, identification of dust suppressants if applied, meter readings of spray bar and/or pump or odometer reading of trucks used to apply water and/or dust suppressants, dilution ratios of the dust suppressants and diluent used if chemical suppressants are used, and purchase records of the chemical suppressants, if used.

   3) Records of the visible emission notations as required by V.E.3.a above; and

   4) Records of operation, maintenance, inspection, calibration and/or replacement of ash handling and storage equipment and fly ash vacuum pump discharge and silo dust collector vent fabric filters.

   b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance.(§2103.12.h.1)

   c. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. (§2103.12.j.2)

5. Reporting Requirements (§2103.12.k):
   
a. The permittee shall report the following information to the Department quarterly in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: (§2103.12.k.1)

   1) Fly ash and bottom ash throughput data required to be recorded by V.E.4.a above above;

   2) Non-compliance information required to be recorded by V.E.4.b above.

   b. Reporting instances of non-compliance in accordance with condition V.E.5.a.2) above does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. (§2103.12.k.1)
6. Work Practice Standards

a. The permittee shall not, at any time, conduct ash handling and storage operations unless all equipment is properly operated and maintained according to good engineering and air pollution control practices. (§2105.03)

b. If any visible emissions from ash handling and storage operations are observed to extend beyond the facility property line, the permittee shall take reasonable response steps in accordance with the Fugitive Dust Emissions Control Plan submitted to the Department, as specified at condition V.E.1.c above. Failure to take corrective steps shall be considered a deviation from this permit.

"PERMIT SHIELD" IN EFFECT.
F. Plant Roads

Process Description: Vehicular traffic on plant paved and unpaved roads
Annual Vehicle Miles: 37,313 (approximate, paved roads); 15,100 (approximate, unpaved roads)
Control Methods: Wet suppression, chemical treatment, road cleaning, and traffic speed enforcement primarily used for fugitive dust control

1. Restrictions:

a. The permittee shall take actions to minimize the potential for fugitive emissions from vehicular traffic, including but not limited to, the following: (§2105.49)

   1) The periodic scraping of fine dust from haul roads;
   2) The use of water sprays and dust suppressants (other than periods in which the roads are already wetted from a precipitation event or the air temperature is less than 32 degrees Fahrenheit);
   3) Periodic street sweeping of paved roads, including Pittsburgh Street in front of the plant; and
   4) Post and maintain vehicle speed below ten (10) miles per hour.

b. Prior to periods of limestone truck receiving all roads used by the limestone trucks for limestone delivery and subsequent departure shall be water flush to remove silt loading of the roadways. Continued flushing of the roadways during receiving periods shall be conducted as needed to minimize fugitive dust emissions. (§2102.04.b.6)

2. Testing Requirements (§2103.12.h.1):

   None except as specified elsewhere.


   The permittee shall maintain a log of the time, location, type and amount of roadway surface treatment required at condition V.F.1.a above and V.F.1.b above.

4. Record Keeping Requirements (§2103.12.j):

   a. The permittee shall maintain records describing the time, location, type and amount of roadway surface treatment required at condition V.F.3 above. Records shall be maintained on-site for at least five years and provided to the Department upon request. Such records shall include the following: (§2103.12.j)

      1) For paved roads and parking areas:

         a) Daily log of time and location of any vacuum sweeping conducted, including daily engine run time or odometer readings;
         b) Identification, time and location of any maintenance, repairs, patching, treatment, or repaving of roads; and
         c) Maintenance of a log explaining the reasons any required vacuum sweeping was not performed.
2) For unpaved roads and shoulders of paved roads:
   a) Daily log of time and location of treated areas;
   b) Identification of dust suppressants if applied;
   c) Daily log of meter readings of spray bar and/or pump or odometer reading of trucks used to apply water and/or dust suppressants;
   d) Daily log of the dilution ratios of the dust suppressants and diluent used if chemical suppressants are used; and,
   e) Purchase records of the chemical suppressants, if used.

b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2103.12.h.1)

c. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. (§2103.12.j.2)

5. Reporting Requirements (§2103.12.k):

a. The permittee shall report non-compliance information required to be recorded by the Department in condition V.F.4.b above in accordance with General Condition III.15. The reports shall contain all required information for the time period of the report: (§2103.12.k.1)

b. Reporting instances of non-compliance in accordance with condition V.F.5.a does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. (§2103.12.k.1)

6. Work Practice Standards (§2103.12.h.1)

a. In addition to the requirements of condition V.F.1.a above, the permittee shall comply with the operation and control emissions as specified in the Fugitive Dust Emissions Control Plan submitted to the Department as follows:

1) Plant personnel shall ensure that all trucks entering the plant are tarped, free of debris and not leaking, and shall prohibit trucks not complying with such requirements from entering the plant.
2) Trucks shall be restricted to driving on designated thoroughfares and shall not drive on unpaved road shoulders or other restricted plant areas.
3) The permittee shall ensure prompt clean-up of any roadway spillage upon occurrence.

"PERMIT SHIELD" IN EFFECT.
G. Station Cooling Water Cooling Tower

Process Description: One cooling tower of cross flow forced draft design, consisting of three (3) identical cells

Capacity: 19,500 gallons recirculating water per minute

Raw Material(s)/Fuel(s): River make-up water

Control Device: Mist eliminators

1. Restrictions:

a. The permittee shall properly maintain and operate the subject cooling tower at all times according to the following conditions: (§2103.12.a.2.B, Installation Permit No. 0054-1004b Condition V.D.1.a)

1) The subject unit shall use treated river water at all times.
2) The cooling tower shall be equipped with a mist eliminator which shall operate at all times of unit operation and shall achieve a drift factor of 0.0011% of the circulating water flow or better, as established by the manufacturer.
3) The cooling tower shall be operated and maintained in accordance with the manufacturer’s specifications and instructions.

b. Particulate emissions from each cooling tower cell shall not exceed the limitations in Table V.G.1. below at any time: (§2103.12.a.2.B, Installation Permit No. 0054-1004b Condition V.D.1.b)

TABLE V.G.1 Cooling Tower Emission Limitations

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Hourly Emission Limit lb/hr</th>
<th>Annual Emission Limit tons/year*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter</td>
<td>0.04</td>
<td>0.17</td>
</tr>
<tr>
<td>PM-10</td>
<td>0.04</td>
<td>0.17</td>
</tr>
<tr>
<td>PM-2.5</td>
<td>0.04</td>
<td>0.17</td>
</tr>
</tbody>
</table>

* A year is defined as any consecutive 12-month period.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition IV.13 entitled “Emissions Testing.” (§2103.12.h.1)

3. Monitoring Requirements (§2102.04.e):

a. The permittee shall monitor the total dissolved solids (TDS) of the make-up water at least once per month. (§2103.12.i, Installation Permit No. 0054-1004b Condition V.D.3)

4. Record Keeping Requirements (§§2103.12.j & k):
a. The permittee shall keep and maintain the records of TDS required to be monitored by condition V.G.3.a above and present such records upon request by the Department. (§2103.12.j, Installation Permit No. 0054-I004b Condition V.D.4.a)

b. The permittee shall keep and maintain the manufacturer’s specifications for the mist eliminator including the drift factor and present such records upon request by the Department. (§2103.12.j)

c. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2103.12.j, Installation Permit No. 0054-I004b Condition V.D.4.b)

d. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. (§2103.12.j, Installation Permit No. 0054-I004b Condition V.D.4.c)

5. Reporting Requirements:

a. The permittee shall report non-compliance information required to be recorded by the Department in V.G.4.c accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: (§2103.12.k.1, Installation Permit No. 0054-I004b Condition V.D.5.a)

b. Reporting instances of non-compliance in accordance with condition V.G.5.a does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. (§2103.12.k.1, Installation Permit No. 0054-I004b Condition V.D.5.b)

6. Work Practice Standards:

None unless provided elsewhere.

“PERMIT SHIELD” IN EFFECT.
H. Facility Space Heaters

Process Description: Seven portable torpedo space heaters, four rated at 0.6 MMBtu/hr each; two rated at 0.35 MMBtu/hr each, and one rated at 0.15 MMBtu/hr

Max. Heat Input: 3.25 MMBtu/hr, combined

Raw Material(s)/Fuel(s): No. 1 or No. 2 Fuel Oil

Control Device: None

1. Restrictions:
   a. The permittee shall maintain and operate the subject equipment in accordance with good engineering and air pollution control practices. (§2103.12.a.2.B)
   b. The fuel oil combusted in the space heaters shall have a maximum fuel sulfur content of 0.05% (weight). (§2103.12.a.2.B)
   c. Fuel oil usage in the space heaters shall not exceed a total of 210.9 thousand gallons in any 12 consecutive months, based on a heating value of 135,000 btu per gallon. (§2103.12.a.2.B)

2. Testing Requirements:

   The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition IV.13 entitled “Emissions Testing.” (§2103.12.h.1)

3. Monitoring Requirements (§2102.04.e):

   None unless provided elsewhere.

4. Record Keeping Requirements (§§2103.12.j & k):
   a. The permittee shall keep and maintain the following data for the space heaters: (§2103.12.a.2.B)
      1) Combined fuel oil consumption (monthly and 12-month);
      2) Records of fuel oil supplier’s certification of sulfur content, and fuel oil heating value (each shipment received);
      3) Records of operation, maintenance, inspection, calibration and/or replacement of combustion equipment.
   b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2103.12.j)
   c. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. (§2103.12.j)

5. Reporting Requirements:
   a. The permittee shall report non-compliance information required to be recorded by the Department in V.H.4.b accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: (§2103.12.k.1)
b. Reporting instances of non-compliance in accordance with condition V.H.5.a above does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. (§2103.12.k.1)

6. **Work Practice Standards:**

None unless provided elsewhere.
# FGD Limestone Handling System:

**Process Description:** FGD limestone handling system  
**Throughput:** 314.633 tons limestone/yr  
**System Components:** Barge/truck unloading, short term limestone storage pile, back-up limestone stockpile, conveyors, transfer towers, day silos and limestone preparation  
**Controls:** Fugitive dust controls, baghouses on day silos A & B  

The permittee is also subject to the following conditions:

## Restrictions

a. The permittee shall conduct limestone handling operations in a manner such that emissions from these operations are not visible at or beyond the facility property line at any time. (§2104.05)

b. Particulate matter emissions from limestone crushing, grinding, or screening shall not at any time exceed the rate determined by the following formula (§2104.02.c):

\[
A \text{ (lb/hr)} = 0.76E^{0.42}
\]

where  
- \( A \) = allowable emissions in pounds per hour  
- \( E \) = emission index = \((F) \times (W)\) in pounds per hour  
- \( F \) = process factor for crushing, grinding or screening 20 lbs/ton of feed  
- \( W \) = production or charging rate (tons/hr)

c. Limestone day silos A & B shall each be equipped with exhaust vent dust collectors that shall not cause to be discharged into the atmosphere from either of the two (2) limestone day silo baghouse vents, particulate matter emissions in excess of 0.01 grains/dscf at any time. (§2102.04.b.6, §2105.03)

d. Limestone day silos dust collectors A & B shall be operated at all times within the minimum and maximum differential pressure drop across the collectors as specified in the manufacturer’s or vendor’s specifications. (§2102.04.b.6, §2105.03)

e. The permittee shall ensure that the limestone handling operations are properly operated to minimize fugitive emissions and control particulate emissions as follows: (§2102.04.b.6, §2105.49)

1) **Barge Unloader:**
   
a. The permittee shall ensure that the barge unloader is properly operated in order to minimize material spillage. The permittee shall ensure prompt clean-up of any spillage at the barge unloading operations upon occurrence.
   
b. The permittee shall repair any leaks in chutes and hoppers as necessary.
   
c. Material transfer points shall be enclosed to the extent possible.
   
d. Transfer points hydraulic crane to receiving hopper, receiving hopper to belt feeder LBF-2, and belt feeder LBF-2 to the stackout conveyor shall be equipped with dust suppression systems and shall be employed as needed to minimize fugitive dust emissions. (note: Phase II labels not available)

2) **Short term and Stockpile Storage Piles:**
a) Plant personnel shall instruct limestone trucks to dump as close as practical to the limestone storage area.
b) Plant personnel shall restrict the number of vehicles on the pile to those engaged only in essential plant operations. Such pile management operations shall be conducted to minimize the disturbance of the piles.
c) Plant personnel shall ensure that all trucks entering the plant are tarped, free of debris and not leaking. Trucks shall be restricted to drive on designated thoroughfares and shall not drive on road shoulders or other restricted plant areas.
d) The permittee shall control fugitive particulate emissions from the limestone piles through the use of water, surfactants or water and chemical suppression, as needed.
e) Storage pile reclaim shall have a dust suppression system installed and operated as required to minimize fugitive emissions.
f) Pile management shall be conducted with wheeled front-end loaders using techniques and vehicle speeds as required to minimize fugitive dust emissions.

3) Material Conveyors:
   a) Except during maintenance, the permittee shall ensure that all conveyors are covered. Upon cover removal for maintenance, such covers shall be replaced as soon as possible, and prior to routine conveyor operation.
   b) The permittee shall ensure that scrapers on conveyors are maintained in good operating condition.
   c) The permittee shall inspect all belts and ensure that such are in good operating condition to achieve proper tracking and loading.
   d) The permittee shall minimize the operation of unloaded conveyors.
   e) Material transfer points shall be enclosed to the extent possible.
   f) The Stackout conveyor shall discharge material to the short-term storage pile through a telescopic chute employed to minimize fugitive dust emissions from the pile in-loading.
   g) Stanler type feeders ST1, (ST1B Phase II) shall be equipped with dust suppression equipment employed to minimize fugitive dust emissions from the transfer of material to reclaim conveyor (Phase II) and receiving conveyor 3-LF-CN-9005.

4) Transfer Towers
   a) The permittee shall enclose the transfer towers to minimize the emissions of fugitive dust to the environment.
   b) The permittee shall ensure prompt clean-up of any spillage at or near the transfer towers upon occurrence.
   c) The permittee shall repair any leaks in chutes, hoppers, covers, enclosures or seals.
   d) The permittee shall minimize the operation of unloaded equipment in order to minimize disturbance of loose material.
   e) Transfer points in the transfer towers shall be equipped with dust suppression systems and shall be employed as needed to minimize fugitive dust emissions.

5) Limestone Prep Building:
   a) The permittee shall enclose the prep building to minimize the emissions of fugitive dust to the environment.
   b) The permittee shall ensure prompt clean-up of any spillage at the prep building upon occurrence.
   c) The permittee shall repair any leaks in chutes, hoppers, covers, enclosures or seals.
   d) The permittee shall minimize the operation of unloaded equipment in order to minimize disturbance of loose material.
e) Dust suppression equipment shall be employed as needed at the transfer of material from the prep feed conveyor 3-LF-CNVT-9007 to conveyor 3-LF-CNVT-9010 and at the entrance to the limestone day silos, to minimize fugitive dust emissions.

f. Particulate emissions from the limestone handling operations shall not exceed the limitations in Table V.I.1. below at any time: (§2102.04.b.6)

**TABLE V.I.1 Limestone Handling Operations Emission Limitations**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Annual Emission Limit tons/year*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter</td>
<td>28.08</td>
</tr>
<tr>
<td>PM-10</td>
<td>8.11</td>
</tr>
<tr>
<td>PM-2.5</td>
<td>2.3</td>
</tr>
</tbody>
</table>

* A year is defined as any consecutive 12-month period.

g. Particulate emissions from each limestone day silo A and B shall not exceed the limitations in Table V.I.2. below at any time: (§2102.04.b.6)

**TABLE V.I.2 Limestone Day Silos A & B Emission Limitations**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Annual Emission Limit tons/year* Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter</td>
<td>1.50</td>
</tr>
<tr>
<td>PM-10</td>
<td>1.50</td>
</tr>
<tr>
<td>PM-2.5</td>
<td>1.50</td>
</tr>
</tbody>
</table>

* A year is defined as any consecutive 12-month period.

h. The provisions of 40 CFR subpart OOO are applicable to the following affected facilities in fixed nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. (§60.670(a)(1))

i. On and after the date on which the performance test required to be conducted by condition V.I.2.a below is completed, the permittee shall not cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any stack emissions which: (§60.672(a))

1) Contain particulate matter in excess of 0.05 g/dscm (0.022 gr/dscf); and
2) Exhibit greater than 7 percent opacity.

j. On and after the sixtieth day after achieving the maximum production rate at which the limestone handling system will be operated, but not later than 180 days after initial startup as required under condition V.I.2.f below, the permittee shall not cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which
exhibit greater than 10 percent opacity, except as provided in conditions V.I.1.k below and (e). (§60.672(b))

k. Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of conditions V.I.1.i. and V.I.1.j above. (§60.672(d))

l. If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in conditions V.I.1.i. and V.I.1.j above, or the building enclosing the affected facility or facilities must comply with the following emission limits: (§60.672(e))

1) The permittee shall not cause to be discharged into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other affected facility any visible fugitive emissions except emissions from a vent as defined in 40 CFR §60.671.

2) The permittee shall not cause to be discharged into the atmosphere from any vent of any building enclosing any transfer point on a conveyor belt or any other affected facility emissions which exceed the stack emissions limits in condition V.I.1.i above.

m. On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under condition V.I.2.f below, the permittee shall not cause to be discharged into the atmosphere from any baghouse that controls emissions from only an individual, enclosed storage bin, stack emissions which exhibit greater than 7 percent opacity. (§60.672(f))

n. The opacity standards set forth above shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in this permit. (§60.11(c))

o. At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Department which shall include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. (§60.11(d))

2. Testing Requirements

a. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Department, the permittee of such facility shall conduct performance test(s) and furnish the Department a written report of the results of such performance test(s). (§60.8(a))

b. Performance tests shall be conducted under such conditions as the Department shall specify to the permittee based on representative performance of the affected facility. The permittee shall make available to the Department such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and
malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard. (§60.8(c))

c. Each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable condition. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the permittee’s control, compliance may, upon the Department’s approval, be determined using the arithmetic mean of the results of the two other runs. (§60.8(f))

d. In conducting the performance tests required in condition V.I.2.a above, the permittee shall use as reference methods and procedures the test methods in appendix A of 40 CFR Part 60 or other methods and procedures as specified in this section. Acceptable alternative methods and procedures are given in condition V.I.2.n below. (§60.675(a))

e. Compliance with opacity standards in V.I.2 shall be determined by conducting observations in accordance with Method 9 in appendix A of 40 CFR part 60 or any alternative method that is approved by the Department. For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard). (§60.11(b))

f. For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in condition V.I.2.a above unless one of the following conditions apply. If no performance test under condition V.I.2.a above is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under condition V.I.2.a above, the permittee shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Department of the rescheduled date. In these cases, the notification to the Department is as required in condition V.I.2.n below. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under condition V.I.2.a above. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Method 9 of appendix B of 40 CFR Part 60. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The permittee of an affected facility shall make available, upon request by the Department, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. (§60.11(e)(1))

g. The permittee of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with condition V.I.2.c above, shall record the opacity of emissions, and shall report to the Department the opacity results along with the results of the initial performance test required under condition V.I.2.a above. The inability of a permittee to secure a
visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test. (§60.11(e)(2))

h. The permittee shall determine compliance with the particulate matter standards in condition V.I.1.i above as follows: (§60.675(b))

1) Method 5 or Method 17 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

2) Method 9 and the procedures in conditions V.I.2.e, V.I.2.f and V.I.2.g above shall be used to determine opacity.

i. In determining compliance with the particulate matter standards in condition V.I.1.j above, the owner or operator shall use Method 9 and the procedures in §60.11, with the following additions: (§60.675(c)(1))

1) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

2) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9, Section 2.1) must be followed.

3) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

j. In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under condition V.I.1.m above, using Method 9, the duration of the Method 9 observations shall be 1 hour (ten 6-minute averages). (§60.675(c)(2))

k. When determining compliance with the fugitive emissions standard for any affected facility described under condition V.I.1.j above, the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply: (§60.675(c)(3))

1) There are no individual readings greater than 10 percent opacity; and

2) There are no more than 3 readings of 10 percent for the 1-hour period.

l. In determining compliance with condition V.I.1.i above, the permittee shall use Method 22 to determine fugitive emissions. The performance test shall be conducted while all affected facilities inside the building are operating. The performance test for each building shall be at least 75 minutes
in duration, with each side of the building and the roof being observed for at least 15 minutes. (§60.675(d))

m. The permittee may use the following as alternatives to the reference methods and procedures specified conditions V.I.2.i, V.I.2.j and V.I.2.k above if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used: (§60.675(e))

1) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

2) Separate the emissions so that the opacity of emissions from each affected facility can be read.

n. If, after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting any rescheduled performance test required in this section, the owner or operator of an affected facility shall submit a notice to the Department at least 7 days prior to any rescheduled performance test. (§60.675(g))

o. The permittee of an affected facility shall provide, or cause to be provided, performance testing facilities as follows: (§60.8(e))

1) Sampling ports adequate for test methods applicable to such facility. This includes constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

2) Safe sampling platform(s).

3) Safe access to sampling platform(s).

4) Utilities for sampling and testing equipment.

p. The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing, if required, shall be performed in accordance with Article XXI §2108.02 and Site Level Condition IV.13, entitled “Emissions Testing.” (§2103.12.h.1)

3. Monitoring Requirements

a. Observations of visible emissions from barge unloading, limestone conveying, limestone pile maintenance and storage, transfer towers, and limestone prep building vent exhausts shall be performed once per week during normal daylight operations on weeks in which the units are operating. A trained employee shall record whether any emissions are observed and whether these emissions extend beyond the facility property line. (§2104.05, §2102.04.b.6)

b. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. Method 9 certification is not a requirement for compliance with condition V.I.3.a above. (§2104.05, §2102.04.b.6)
c. Instrumentation shall be installed to measure the differential pressure drop across the limestone day silo baghouses to within $\frac{1}{2}''$ w.c. of actual. (§2102.04.b.6, §2105.03)

d. The permittee shall record the differential pressure drop across the day silo baghouses weekly while the baghouses are treating exhaust flow from the silos. (§2102.04.b.6, §2105.03)

e. The limestone handling system and day silos shall be visibly inspected weekly to determine compliance with condition V.I.1.e above. (§2102.04.b.6, §2105.03)

4. **Record Keeping Requirements**

   a. The permittee shall keep and maintain the following data for the limestone handling and storage equipment (§2102.04.b.6):

   1) Limestone throughput (tons/day);
   2) A log of time and location of treated pile areas, identification of dust suppressants if applied, dilution ratios of the dust suppressants and diluent used if chemical suppressants are used, and purchase records of the chemical suppressants, if used.
   3) Records of the visible emission notations as required by V.I.3.a above;
   4) Differential pressure drop across day silos A & B (weekly); and
   5) Records of operation, maintenance, inspection, calibration and/or replacement of limestone handling and storage equipment.

   b. The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a monitoring device is inoperative. (§60.7(b))

   c. The permittee shall maintain a file of all measurements, including monitoring device, and performance testing measurements; all monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this 40 CFR 60, subpart OOO recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records. (§60.7(f))

   d. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2102.04.b.6)

   e. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. (§2102.04.b.6)

5. **Reporting Requirements** (§2102.04.b.6, §2102.04.e., §2103.12.k)

   a. The permittee shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in conditions V.I.1.i, V.I.1.j, V.I.1.k, V.I.1.l and V.I.1.m above, including reports of opacity observations made using Method 9 to demonstrate compliance with conditions V.I.1.j, and V.I.1.m above and reports of observations using Method 22 to demonstrate compliance with condition V.I.1.l above. (§60.675(f))
b. The subpart A requirement under 40 CFR §60.7(a)(2) for notification of the anticipated date of initial startup of an affected facility shall be waived for owners or operators of affected facilities regulated under this subpart. (§60.675(h))

c. A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator and the Department. (§60.675(h)(i))

d. For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the permittee to the Department. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available. (§60.675(h)(i)(1))

e. Any owner or operator subject to the provisions of this part shall furnish the Department written notification or, if acceptable to both the Department and the owner or operator of a source, electronic notification, as follows: (§60.7(a))

1) A notification of the date construction of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form. (§60.7(a)(1))

2) A notification of the anticipated date for conducting the opacity observations required by condition V.I.2.f above. The notification shall also include, if appropriate, a request for the Department to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date. (§60.7(a)(6))

f. The permittee shall report the following information to the Department quarterly in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: (§2103.12.k.1, §2102.04.b.6)

1) Limestone throughput data required to be recorded by condition V.D.4.a above; and
2) Non-compliance information required to be recorded by V.D.4.b above.

g. Reporting instances of non-compliance in accordance with condition V.D.5.a.2) above does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. (§2103.12.k.1, §2102.04.b.6)

6. Work Practice Standards

a. The permittee shall not, at any time, conduct limestone handling and storage operations unless all equipment is properly operated and maintained according to good engineering and air pollution control practices. (§2105.03, §2102.04.b.6)

b. If any visible emissions from limestone handling and storage operations are observed to extend beyond the facility property line, the permittee shall take reasonable response steps to eliminate the emissions. Failure to take corrective steps shall be considered a deviation from this permit. (§2105.03, §2102.04.b.6)

7. Additional Requirements
a. For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in 40 CFR Part 60, subpart OOO, nothing in 40 CFR Part 60, subpart A shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. (§60.11(g))

b. No permittee shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere. (§60.12)
J. **FGD Gypsum Handling System:**

Process Description: FGD gypsum handling system  
Throughput: 576,351 tons gypsum/yr  
System Components: Barge truck loading, gypsum off spec storage pile, conveyors, gypsum dewatering building and on-spec pile storage building  
Controls: Fugitive dust controls

The permittee is also subject to the following conditions:

1. **Restrictions**
   
a. The permittee shall conduct gypsum handling operations in a manner such that emissions from these operations are not visible at or beyond the facility property line at any time. (§2104.05)

b. The permittee shall ensure that the gypsum handling operations are properly operated to minimize fugitive emissions and control particulate emissions as follows: (§2102.04.b.6, §2105.49)

   1) **Gypsum Dewatering Building and On-Spec Pile Storage Building:**
      
      a) The permittee shall cover the gypsum dewatering building and On-Spec Pile Storage Building to minimize the emissions of fugitive dust to the environment.
      
      b) The permittee shall ensure prompt clean-up of any spillage at the dewatering building and On-Spec Pile Storage Building upon occurrence.
      
      c) The permittee shall repair any leaks in chutes, hoppers, covers, enclosures or seals.
      
      d) The permittee shall minimize the operation of unloaded equipment in order to minimize disturbance of loose material.

   2) **Material Conveyors:**
      
      a) Except during maintenance, the permittee shall ensure that all conveyors are covered. Upon cover removal for maintenance, such covers shall be replaced as soon as possible, and prior to routine conveyor operation.
      
      b) The permittee shall ensure that scrapers on conveyors are maintained in good operating condition.
      
      c) The permittee shall inspect all belts and ensure that such are in good operating condition to achieve proper tracking and loading.
      
      d) The permittee shall minimize the operation of unloaded conveyors.
      
      e) Material transfer points shall be enclosed to the extent possible.

   3) **Gypsum Off-Spec Storage Pile:**
      
      a) Plant personnel shall instruct trucks to load as close as practical to the off-spec storage area.
      
      b) Plant personnel shall restrict the number of vehicles on the pile to those engaged only in essential plant operations.
      
      c) Plant personnel shall ensure that all trucks exiting the plant are tarped, free of debris and not leaking. Trucks shall be restricted to drive on designated thoroughfares and shall not drive on road shoulders or other restricted plant areas.
4) Barge Loader:
   a) The permittee shall ensure that the barge loading operation is properly operated in order to minimize material spillage. The permittee shall ensure prompt clean-up of any spillage at the barge loading operations upon occurrence.
   b) The permittee shall repair any leaks in chutes and hoppers as necessary.
   c) Material transfer points shall be enclosed to the extent possible.

c. Particulate emissions from the gypsum handling operations shall not exceed the limitations in Table V.J.1. below at any time: (§2102.04.b.6)

TABLE V.J.1 Gypsum Handling Operations Emission Limitations

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Annual Emission Limit tons/year*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter</td>
<td>12.81</td>
</tr>
<tr>
<td>PM-10</td>
<td>2.77</td>
</tr>
<tr>
<td>PM-2.5</td>
<td>0.89</td>
</tr>
</tbody>
</table>

* A year is defined as any consecutive 12-month period.

2. Testing Requirements

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing, if required, shall be performed in accordance with Article XXI §2108.02 and Site Level Condition IV.13, entitled “Emissions Testing,” (§2103.12.h.1)

3. Monitoring Requirements

The gypsum handling system shall be visibly inspected weekly to determine compliance with condition V.J.1.b above. (§2102.04.b.6, §2105.03)

4. Record Keeping Requirements

a. The permittee shall keep and maintain the following data for the gypsum handling and storage equipment (§2102.04.b.6):

   1) Gypsum throughput (tons/day);
   2) A log of time and location of treated pile areas, identification of dust suppressants if applied, dilution ratios of the dust suppressants and diluent used if chemical suppressants are used, and purchase records of the chemical suppressants, if used.
   3) Records of operation, maintenance, inspection, calibration and/or replacement of gypsum handling and storage equipment.

b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2102.04.b.6)

c. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. (§2102.04.b.6)
5. Reporting Requirements

a. The permittee shall report the following information to the Department in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: (§2103.12.k.1, §2102.04.b.6)

1) Gypsum throughput data required to be recorded by condition V.J.4.a above; and
2) Non-compliance information required to be recorded by V.J.4.b above.

b. Reporting instances of non-compliance in accordance with condition V.J.5.a.2) abovedoes not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. (§2103.12.k.1, §2102.04.b.6)

6. Work Practice Standards

If any visible emissions from gypsum handling and storage operations are observed to extend beyond the facility property line, the permittee shall take reasonable response steps to eliminate the emissions. Failure to take corrective steps shall be considered a deviation from this permit. (§2105.03, §2102.04.b.6)
K. Diesel Air Compressor:

Process Description: Two (2) Diesel Air Compressors
Rating: 465 Hp (each)
Raw Material(s)/Fuel(s): Diesel fuel, maximum sulfur content of 0.2% by weight
Control Device: None

The permittee is also subject to the following conditions:

1. Restrictions
   a. The permittee shall use only diesel fuel that meets the following requirements: (§2103.12.a.2.B; §63.6604(b); §80.510(b))
      1) Sulfur content no higher than 0.0015% sulfur content (by weight) (15 ppm S); and
      2) A minimum cetane index of 40, or a maximum aromatic content of 35 volume percent.
   b. The Diesel Air Compressors shall not be operated for more than 500 hours, including operation for maintenance checks and readiness testing, in any 12-month period. (§2103.12.a.2.B; §63.6640(f))
      1) Maintenance checks and readiness testing shall be limited to 100 hours per year.
      2) The Diesel Air Compressors shall be allowed to operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided in Condition V.K.1.b.1) above.
   c. The permittee shall minimize the engine’s time spent at idle during startup and minimize the engine’s startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. (§2103.12.a.2.B; §63.6625(b))
   d. Emissions from the subject generator shall not exceed the limitations in Table V.K.1. below at any time: (§2103.12.a.2.B)

   **TABLE V.K.1**

   Diesel Air Compressor Emission Limitations

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Hourly Emission Limit</th>
<th>Annual Emission Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lb/hr (each unit)</td>
<td>tons/year* (each unit)</td>
</tr>
<tr>
<td>PARTICULATE MATTER</td>
<td>0.09</td>
<td>0.02</td>
</tr>
<tr>
<td>PM-10</td>
<td>0.09</td>
<td>0.02</td>
</tr>
<tr>
<td>PM-2.5</td>
<td>0.09</td>
<td>0.02</td>
</tr>
<tr>
<td>NITROGEN OXIDES</td>
<td>6.45</td>
<td>1.61</td>
</tr>
<tr>
<td>SULFUR OXIDES</td>
<td>0.63</td>
<td>0.16</td>
</tr>
<tr>
<td>CARBON MONOXIDE</td>
<td>1.43</td>
<td>0.36</td>
</tr>
<tr>
<td>VOLATILE ORGANIC COMPOUNDS</td>
<td>0.10</td>
<td>0.02</td>
</tr>
</tbody>
</table>

   * A year is defined as any 12 consecutive months.
2. Testing Requirements

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition IV.13 above entitled “Emissions Testing.” (§2103.12.h.1)

3. Monitoring Requirements

The permittee shall install, operate and maintain the operation of a non-resettable hour on each air compressor. [§2103.12.a.2.B; §63.6625(f)]

4. Record Keeping Requirements

a. The permittee shall keep and maintain the following data for the subject generator. (§2103.12.j, §63.6655(f))

   1) Fuel consumption (daily, monthly, and 12-month), type of fuel consumed and suppliers’ certification of sulfur content, and heating value;
   2) Cold starts (date, time and duration of each occurrence);
   3) Total operating hours, (hours/day, monthly and 12-month); and
   4) Records of operation, maintenance, inspection, calibration and/or replacement of combustion equipment.

b. Records of diesel fuel certifications from fuel suppliers shall be maintained per shipment. Certifications shall include the name of the supplier and a statement from the supplier that the fuel complies with ASTM D975 "Standard Specifications for Diesel Fuel Oils.” (§2103.12.j)

c. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2103.12.j)

d. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. (§2103.12.j)

5. Reporting Requirements

a. The permittee shall report the following information to the Department in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: (§2103.12.k.1)

   1) Monthly and 12-month data required to be recorded by condition V.K.4.a above;
   2) Cold start information; and
   3) Non-compliance information required to be recorded by V.K.4.c above.

b. Reporting instances of non-compliance in accordance with condition V.K.5.a above does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. (§2103.12.k.1)
6. **Work Practice Standards:**

   a. The Diesel Air Compressors shall be properly operated and maintained according to manufacturer’s specifications. The manufacturer’s operation and maintenance manuals shall be kept on site at all times. [§2103.12.a.2.B; §2105.03; §63.6605(b)]

   b. The permittee shall perform the following maintenance on each air compressor: [§2103.12.a.2.C; §63.6603(a), Table 2.d.4]

   1) Change oil and filter every 500 hours of operation or annually, whichever comes first;
   2) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
   3) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

   c. The permittee shall have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Condition V.K.6.b.1). [§63.6625(i)]

   d. The permittee shall operate and maintain the air compressors according to the manufacturer’s emission-related written instructions or shall develop a maintenance plan. This plan shall provide to the extent practicable for the maintenance and operation of each generator in a manner consistent with good air pollution control practice for minimizing emissions. [§2103.12.a.2.C; §63.6625(e)(3)]
L. Waste Water Treatment Plant Lime Silo

Process Description: Lime silo
Raw Material: Lime
Control Device: Bin vent dust collector

The permittee is also subject to the following conditions:

1. Restrictions

   a. The permittee shall conduct lime handling operations in a manner such that emissions from these operations are not visible at or beyond the facility property line at any time. (§2104.05)

   b. The WWT lime silo shall be equipped with an exhaust vent dust collector that shall not cause to be discharged into the atmosphere from the silo baghouse vents, particulate matter emissions in excess of 0.01 grains/dscf at any time. (§2102.04.b.6, §2105.03)

   c. The WWT lime silo dust collector shall be operated at all times within the minimum and maximum differential pressure drop across the collector as specified in the manufacturer’s or vendor’s specifications. (§2102.04.b.6, §2105.03)

2. Testing Requirements

   a. The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing, if required, shall be performed in accordance with Article XXI §2108.02 and Site Level Condition IV.13, entitled “Emissions Testing.” (§2103.12.h.1)

3. Monitoring Requirements

   a. Instrumentation shall be installed to measure the differential pressure drop across the lime silo baghouse to within ½” w.c. of actual. (§2102.04.b.6, §2105.03)

   b. The permittee shall record the differential pressure drop across the silo baghouse weekly while the baghouse is treating exhaust flow from the silo. (§2102.04.b.6, §2105.03)

   c. The lime silo shall be visibly inspected weekly to determine compliance with conditions V.L.1.a, V.L.1.b and V.L.1.c above. (§2102.04.b.6, §2105.03)

4. Record Keeping Requirements

   a. The permittee shall keep and maintain the following data for the WWT lime silo (§2102.04.b.6):

      1) Lime throughput (tons/day); and
      2) Records of operation, maintenance, inspection, calibration and/or replacement of control equipment.

   b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2102.04.b.6)
c. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. (§2102.04.b.6)

5. Reporting Requirements

a. The permittee shall report the following information to the Department in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: (§2103.12.k.1, §2102.04.b.6)

   1) Lime throughput data required to be recorded by condition V.L.4.c above; and
   2) Non-compliance information required to be recorded by V.L.4.b above.

b. Reporting instances of non-compliance in accordance with condition V.L.5.b does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. (§2103.12.k.1, §2102.04.b.6)

6. Work Practice Standards

If any visible emissions from the WWT lime silo are observed to extend beyond the facility property line, the permittee shall take reasonable response steps to eliminate the emissions. Failure to take corrective steps shall be considered a deviation from this permit. (§2105.03, §2102.04.b.6)
M. 40 CFR 63 Subpart UUUUU Conditions for Main Boiler No. 1, Stack No. 1

Process Description: Tangentially-Fired Boiler  
Facility ID: Main Boiler No.1  
Maximum Design Rate: 6,000 MMBtu/hr (maximum hourly rating); 5,500 MMBtu/hr (maximum annual rating) coal and synfuel; 1,028 MMBtu/hr natural gas  
Fuel(s): Coal or synfuel (primary); Natural gas (auxiliary)  
Control Device(s): Low NOx burners, electrostatic precipitator (ESP) with flue gas conditioning, selective catalytic reduction (SCR)  
CEM: NOx, SO2, CO2 and opacity (COM)

1. Restrictions:
   a. The permittee shall comply with 40 CFR Part 63 Subpart UUUUU no later than April 16, 2015. (§63.9984(b))
   b. The permittee shall meet each emission limit in Table V.M.1 that applies to the permittee’s EGU, for each EGU at the permittee’s source, except as provided under §63.10009 where these limits apply at all times except during periods of startup and shutdown. (§63.9991(a)(1), Table 2 of 40 CFR Part 63 Subpart UUUU, (§63.10000(a))

<table>
<thead>
<tr>
<th>For the following pollutants</th>
<th>The permittee shall meet the following emission limits and work practice standards</th>
<th>Using these requirements, as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in Table 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filterable particulate matter (PM)</td>
<td>3.0E−2 lb/MMBtu or 3.0E−1 lb/MWh ²</td>
<td>Collect a minimum of 1 dscm per run.</td>
</tr>
<tr>
<td>OR</td>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Total non-Hg HAP metals</td>
<td>5.0E−5 lb/MMBtu or 5.0E−1 lb/GWh</td>
<td>Collect a minimum of 1 dscm per run.</td>
</tr>
<tr>
<td>OR</td>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Individual HAP Metals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony (Sb)</td>
<td>8.0E−1 lb/TBtu or 8.0E−3 lb/GWh</td>
<td></td>
</tr>
<tr>
<td>Arsenic (As)</td>
<td>1.1E0 lb/TBtu or 2.0E−2 lb/GWh</td>
<td></td>
</tr>
<tr>
<td>Beryllium (Be)</td>
<td>2.0E−1 lb/TBtu or 2.0E−3 lb/GWh</td>
<td></td>
</tr>
<tr>
<td>Cadmium (Cd)</td>
<td>3.0E−1 lb/TBtu or 3.0E−3 lb/GWh</td>
<td></td>
</tr>
<tr>
<td>Chromium (Cr)</td>
<td>2.8E0 lb/TBtu or 3.0E−2 lb/GWh</td>
<td></td>
</tr>
<tr>
<td>Cobalt (Co)</td>
<td>8.0E−1 lb/TBtu or 8.0E−3 lb/GWh</td>
<td></td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>1.2E0 lb/TBtu or 2.0E−2 lb/GWh</td>
<td></td>
</tr>
</tbody>
</table>
### EMISSION UNIT LEVEL TERMS AND CONDITIONS

| Manganese (Mn) | 4.0E0 lb/TBtu or 5.0E–2 lb/GWh |
| Nickel (Ni) | 3.5E0 lb/TBtu or 4.0E–2 lb/GWh |
| Selenium (Se) | 5.0E0 lb/TBtu or 6.0E–2 lb/GWh |

| Hydrogen chloride (HCl) | 2.0E–3 lb/MMBtu or 2.0E–2 lb/MWh |
| OR | |
| Sulfur dioxide (SO2) | 2.0E–1 lb/MMBtu or 1.5E0 lb/MWh |

| c. Mercury (Hg) | 1.2E0 lb/TBtu or 1.3E–2 lb/GWh |

For Method 26A, collect a minimum of 0.75 dscm per run; for Method 26, collect a minimum of 120 liters per run.

For ASTM D6348–03 or Method 320, sample for a minimum of 1 hour.

SO2 CEMS

LEE Testing for 30 days with a sampling period consistent with that given in section 5.2.1 of appendix A to this subpart per Method 30B at appendix A-8 to part 60 of this chapter or Hg CEMS or sorbent trap monitoring system only.

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1. For LEE emissions testing for total PM, total HAP metals, individual HAP metals, HCl, and HF, the required minimum sampling volume shall be increased nominally by a factor of two.

2. Gross electric output.

3. Incorporated by reference, see § 63.14.

### 2. Testing Requirements

a. If the permittee does not qualify as a LEE for total non-mercury HAP metals, individual non-mercury HAP metals, or filterable particulate matter (PM), then the permittee must demonstrate compliance through an initial performance test and must monitor continuous performance monitoring through either use of a particulate matter continuous parametric monitoring system (PM CPMS), or, for an existing EGU, compliance performance testing repeated quarterly. The permittee shall comply with the following requirements in Table V.M.2 for establishing operating limits if the PM CPMS option is selected. (§63.10000(c)(1)(iv), Table 6 of 40 CFR Part 63 Subpart UUUUUU)

#### TABLE V.M.2

<table>
<thead>
<tr>
<th>If the permittee has an applicable emission limit for . . .</th>
<th>And the permittee chooses to establish PM CPMS operating limits, the permittee shall . . .</th>
<th>And . . .</th>
<th>Using . . .</th>
<th>According to the following procedures . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate matter (PM), total non-mercury HAP metals.</td>
<td>Install, certify, maintain, and operate a PM CPMS for monitoring emissions</td>
<td>Establish a site-specific operating limit in units of PM</td>
<td>Data from the PM CPMS and the PM or HAP</td>
<td>1. Collect PM CPMS output data during the entire period of the performance tests.</td>
</tr>
</tbody>
</table>
EMISSION UNIT LEVEL
TERMS AND CONDITIONS

<table>
<thead>
<tr>
<th>individual non-mercury HAP metals, total HAP metals, individual HAP metals</th>
<th>discharged to the atmosphere according to §63.10010(g)(1)</th>
<th>CPMS output signal (e.g., milliamps, mg/acm, or other raw signal)</th>
<th>metals performance tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Record the average hourly PM CPMS output for each test run in the three run performance test.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Determine the highest 1-hour average PM CPMS measured during the performance test demonstrating compliance with the filterable PM or HAP metals emissions limitations.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. The permittee shall demonstrate that compliance has been achieved, by conducting the required performance tests and other activities, no later than 180 days after April 16, 2015. (§63.9984(f), (§63.10011(a))

c. **General requirements.** For each of the permittee’s affected EGUs, the permittee shall demonstrate initial compliance with each applicable emissions limit in Table 1 or 2 of this subpart through performance testing. Where two emissions limits are specified for a particular pollutant (e.g., a heat input-based limit in lb/MBtu and an electrical output-based limit in lb/MWh), the permittee shall demonstrate compliance with either emission limit. For a particular compliance demonstration, the permittee may be required to conduct one or more of the following activities in conjunction with performance testing: collection of hourly electrical load data (megawatts); establishment of operating limits according to §63.10011 and Tables 4 and 7 to this subpart; and CMS performance evaluations. In all cases, the permittee shall demonstrate initial compliance no later than the applicable date in paragraph (f) of this section for tune-up work practices for existing EGUs, in §63.9984 for other requirements for existing EGUs, and in paragraph (g) of this section for all requirements for new EGUs. (§63.10005(a))

1) To demonstrate initial compliance with an applicable emissions limit in Table 1 or 2 to this subpart using stack testing, the initial performance test generally consists of three runs at specified process operating conditions using approved methods. If the permittee is required to establish operating limits (see paragraph (d) of this section and Table 4 to this subpart), the permittee shall collect all applicable parametric data during the performance test period. Also, if the permittee chooses to comply with an electrical output-based emission limit, the permittee shall collect hourly electrical load data during the test period. (§63.10005(a)(1))

2) To demonstrate initial compliance using either a CMS that measures HAP concentrations directly (i.e., an Hg, HCl, or HF CEMS, or a sorbent trap monitoring system) or an SO_{2} or PM CEMS, the initial performance test consists of 30 boiler operating days of data collected by the initial compliance demonstration date specified in §63.10005 with the certified monitoring system. (§63.10005(a)(2))

a) The 30-boiler operating day CMS performance test shall demonstrate compliance with the applicable Hg, HCl, HF, PM, or SO_{2} emissions limit in Table 1 or 2 to this subpart.

b) If the permittee chooses to comply with an electrical output-based emission limit, the permittee shall collect hourly electrical load data during the performance test period.

d. **Performance testing requirements.** If the permittee chooses to use performance testing to
demonstrate initial compliance with the applicable emissions limits in Tables 1 and 2 to this subpart for the permittee’s EGU’s, the permittee shall conduct the tests according to §63.10007 and Table 5 to this subpart. For the purposes of the initial compliance demonstration, the permittee may use test data and results from a performance test conducted prior to the date on which compliance is required as specified in §63.9984, provided that the following conditions are fully met: §63.10005(b)

1) For a performance test based on stack test data, the test was conducted no more than 12 calendar months prior to the date on which compliance is required as specified in §63.9984; (§63.10005(b)(1))

2) For a performance test based on data from a certified CEMS or sorbent trap monitoring system, the test consists of all valid CMS data recorded in the 30 boiler operating days immediately preceding that date; (§63.10005(b)(2))

3) The performance test was conducted in accordance with all applicable requirements in §63.10007 and Table 5 to this subpart; (§63.10005(b)(3))

4) A record of all parameters needed to convert pollutant concentrations to units of the emission standard (e.g., stack flow rate, diluent gas concentrations, hourly electrical loads) is available for the entire performance test period; and (§63.10005(b)(4))

5) For each performance test based on stack test data, the permittee certifies, and keeps documentation demonstrating, that the EGU configuration, control devices, and fuel(s) have remained consistent with conditions since the prior performance test was conducted. (§63.10005(b)(5))

e. The permittee shall comply with the following requirements in Table V.M.3 for performance testing: (§63.10007 Table 5 of 40 CFR Part 63 Subpart UUUU)

**TABLE V.M.3**

<table>
<thead>
<tr>
<th>To conduct a performance test for the following pollutant . . .</th>
<th>Using . . .</th>
<th>The permittee shall perform the following activities, as applicable to the permittee’s input- or output-based emission limit . . .</th>
<th>Using2 . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Filterable Particulate matter (PM)</td>
<td>Emissions Testing</td>
<td>a. Select sampling ports location and the number of traverse points</td>
<td>Method 1 at Appendix A–1 to part 60 of this chapter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Determine velocity and volumetric flow-rate of the stack gas</td>
<td>Method 2, 2A, 2C, 2F, 2G or 2H at Appendix A–1 or A–2 to part 60 of this chapter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Determine oxygen and carbon dioxide concentrations of the stack gas</td>
<td>Method 3A or 3B at Appendix A–2 to part 60 of this chapter, or ANSI/ASME PTC 19.10–1981.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d. Measure the moisture content of the stack gas</td>
<td>Method 4 at Appendix A–3 to part 60 of this chapter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e. Measure the filterable PM concentration</td>
<td>Method 5 at Appendix A–3 to part 60 of this chapter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>f. Convert emissions concentration to lb/MMBtu or lb/MWh emissions</td>
<td>For positive pressure fabric filters, Method 5D at Appendix A–3 to part 60 of this chapter for filterable PM emissions.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Note that the Method 5 front half temperature shall be 160 ° ± 14 °C (320 ° ± 25 °F).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Method 19 T-factor methodology at Appendix A–7 to part 60 of this chapter, or calculate using mass</td>
</tr>
<tr>
<td><strong>PM CEMS</strong></td>
<td><strong>Emissions Testing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>----------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Install, certify, operate, and maintain the PM CEMS</td>
<td>a. Select sampling ports location and the number of traverse points</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Install, certify, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems</td>
<td>b. Determine velocity and volumetric flow-rate of the stack gas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb/MMBtu or lb/MWh emissions rates</td>
<td>c. Determine oxygen and carbon dioxide concentrations of the stack gas</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Measure the moisture content of the stack gas</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>e. Measure the HAP metals emissions concentrations and determine each individual HAP metals emissions concentration, as well as the total filterable HAP metals emissions concentration and total HAP metals emissions concentration</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>f. Convert emissions concentrations (individual HAP metals, total filterable HAP metals, and total HAP metals) to lb/MMBtu or lb/MWh emissions rates</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>2. Total or individual non-Hg HAP metals</strong></th>
<th><strong>3. Hydrogen chloride (HCl) and hydrogen fluoride (HF)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emissions Testing</strong></td>
<td><strong>Emissions Testing</strong></td>
</tr>
<tr>
<td>a. Select sampling ports location and the number of traverse points</td>
<td>a. Select sampling ports location and the number of traverse points</td>
</tr>
<tr>
<td>b. Determine velocity and volumetric flow-rate of the stack gas</td>
<td>b. Determine velocity and volumetric flow-rate of the stack gas</td>
</tr>
<tr>
<td>c. Determine oxygen and carbon dioxide concentrations of the stack gas</td>
<td>c. Determine oxygen and carbon dioxide concentrations of the stack gas</td>
</tr>
<tr>
<td>d. Measure the moisture content of the stack gas</td>
<td>d. Measure the moisture content of the stack gas</td>
</tr>
<tr>
<td>e. Measure the HCl and HF emissions concentrations</td>
<td>e. Measure the HCl and HF emissions concentrations</td>
</tr>
</tbody>
</table>

Method 1 at Appendix A–1 to part 60 of this chapter.

Method 2, 2A, 2C, 2F, 2G or 2H at Appendix A–1 or A–2 to part 60 of this chapter.

Method 3A or 3B at Appendix A–2 to part 60 of this chapter, or ANSI/ASME PTC 19.10–1981.3

Method 4 at Appendix A–3 to part 60 of this chapter.

Method 29 at Appendix A–8 to part 60 of this chapter.

Method 19 F-factor methodology at Appendix A–7 to part 60 of this chapter, or calculate using mass emissions rate and electrical output data (see §63.10007(e)).

Method 19 F-factor methodology at Appendix A–7 to part 60 of this chapter, or calculate using mass emissions rate and electrical output data (see §63.10007(e)).
(1) the following conditions when using ASTM D6348-03:
(A) The test plan preparation and implementation in the Annexes to ASTM D6348-03, Sections A1 through A8 are mandatory;
(B) For ASTM D6348-03 Annex A5 (Analyze Spiking Technique), the percent (%) R must be determined for each target analyte (see Equation A5.5);
(C) For the ASTM D6348-03 test data to be acceptable for a target analyte, %R must be 70% ≥ R ≤ 130%; and
(2) spiking levels nominally no greater than two times the level corresponding to the applicable emission limit.
Method 26A must be used if there are entrained water droplets in the exhaust stream.

<table>
<thead>
<tr>
<th>Emission Unit Level Terms and Conditions</th>
<th>Cheswick Generating Station Major Source Operating Permit #0054r</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) the following conditions when using ASTM D6348-03:</td>
</tr>
<tr>
<td></td>
<td>(A) The test plan preparation and implementation in the</td>
</tr>
<tr>
<td></td>
<td>Annexes to ASTM D6348-03, Sections A1 through A8 are</td>
</tr>
<tr>
<td></td>
<td>mandatory;</td>
</tr>
<tr>
<td></td>
<td>(B) For ASTM D6348-03 Annex A5 (Analyze Spiking Technique),</td>
</tr>
<tr>
<td></td>
<td>the percent (%) R must be determined for each target</td>
</tr>
<tr>
<td></td>
<td>analyte (see Equation A5.5);</td>
</tr>
<tr>
<td></td>
<td>(C) For the ASTM D6348-03 test data to be acceptable for a</td>
</tr>
<tr>
<td></td>
<td>target analyte, %R must be 70% ≥ R ≤ 130%; and</td>
</tr>
<tr>
<td></td>
<td>(2) spiking levels nominally no greater than two times the</td>
</tr>
<tr>
<td></td>
<td>level corresponding to the applicable emission limit.</td>
</tr>
<tr>
<td></td>
<td>Method 26A must be used if there are entrained water</td>
</tr>
<tr>
<td></td>
<td>droplets in the exhaust stream.</td>
</tr>
<tr>
<td>f. Convert emissions concentration to</td>
<td></td>
</tr>
<tr>
<td>lb/MMBtu or lb/MWh emissions rates</td>
<td></td>
</tr>
<tr>
<td>Method 19 F-factor methodology at Appendix A–7 to part 60 of</td>
<td></td>
</tr>
<tr>
<td>this chapter, or calculate using mass</td>
<td></td>
</tr>
<tr>
<td>emissions rate and electrical output</td>
<td></td>
</tr>
<tr>
<td>data (see §63.10007(e)).</td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td>OR</td>
</tr>
<tr>
<td>HCl and/or HF CEMS</td>
<td>Appendix B of this subpart.</td>
</tr>
<tr>
<td>a. Install, certify, operate, and</td>
<td>PART 75 OF THIS CHAPTER AND §§63.10010(a), (b), (c), AND (d).</td>
</tr>
<tr>
<td>maintain the HCl or HF CEMS</td>
<td></td>
</tr>
<tr>
<td>b. Install, certify, operate, and</td>
<td></td>
</tr>
<tr>
<td>maintain the diluent gas, flow rate,</td>
<td></td>
</tr>
<tr>
<td>and/or moisture monitoring systems</td>
<td></td>
</tr>
<tr>
<td>c. Convert hourly emissions concentrations to 30 boiler operating</td>
<td>Method 19 F-factor methodology at Appendix A–7 to part 60 of this chapter, or calculate using mass emissions rate and electrical output data (see §63.10007(e)).</td>
</tr>
<tr>
<td>day rolling average lb/MMBtu or lb/MWh emissions rates</td>
<td></td>
</tr>
<tr>
<td>4. Mercury (Hg) Emissions Testing</td>
<td>Method 1 at Appendix A–1 to part 60 of this chapter or Method 30B at Appendix A–8 for Method 30B point selection.</td>
</tr>
<tr>
<td>a. Select sampling ports location and</td>
<td>Method 2, 2A, 2C, 2F, 2G or 2H at Appendix A–1 or A–2 to part 60 of this chapter.</td>
</tr>
<tr>
<td>the number of traverse points</td>
<td></td>
</tr>
<tr>
<td>b. Determine velocity and volumetric</td>
<td>Method 3A or 3B at Appendix A–1 to part 60 of this chapter, or ANSI/ASME PTC 19.10–1981.</td>
</tr>
<tr>
<td>flow-rate of the stack gas</td>
<td>Method 4 at Appendix A–3 to part 60 of this chapter.</td>
</tr>
<tr>
<td>c. Determine oxygen and carbon dioxide</td>
<td>Method 19 F-factor methodology at Appendix A–7</td>
</tr>
<tr>
<td>concentrations of the stack gas</td>
<td></td>
</tr>
<tr>
<td>d. Measure the moisture content of the</td>
<td></td>
</tr>
<tr>
<td>stack gas</td>
<td></td>
</tr>
</tbody>
</table>
| e. Measure the Hg emission concentration | Method 30B at Appendix A–8 to part 60 of this chapter. |}

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<table>
<thead>
<tr>
<th>EMISSION UNIT LEVEL TERMS AND CONDITIONS</th>
<th>Cheswick Generating Station Major Source Operating Permit #0054r</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>lb/TBtu or lb/GWh emission rates</strong></td>
<td>to part 60 of this chapter, or calculate using mass emissions rate and electrical output data (see §63.10007(e)).</td>
</tr>
<tr>
<td><strong>OR</strong> OR <strong>OR</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Hg CEMS</strong></td>
<td>Sections 3.2.1 and 5.1 of Appendix A of this subpart.</td>
</tr>
<tr>
<td>a. Install, certify, operate, and maintain the CEMS</td>
<td></td>
</tr>
<tr>
<td>b. Install, certify, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems</td>
<td>Part 75 of this chapter and §§63.10010(a), (b), (c), and (d).</td>
</tr>
<tr>
<td>c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb/TBtu or lb/GWh emissions rates</td>
<td>Section 6 of Appendix A to this subpart.</td>
</tr>
<tr>
<td><strong>OR</strong> OR <strong>OR</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Sorbet trap monitoring system</strong></td>
<td>Sections 3.2.2 and 5.2 of Appendix A to this subpart.</td>
</tr>
<tr>
<td>a. Install, certify, operate, and maintain the sorbet trap monitoring system</td>
<td></td>
</tr>
<tr>
<td>b. Install, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems</td>
<td>Part 75 of this chapter and §§63.10010(a), (b), (c), and (d).</td>
</tr>
<tr>
<td>c. Convert emissions concentrations to 30 boiler operating day rolling average lb/TBtu or lb/GWh emissions rates</td>
<td>Section 6 of Appendix A to this subpart.</td>
</tr>
<tr>
<td><strong>OR</strong> OR <strong>OR</strong></td>
<td></td>
</tr>
<tr>
<td><strong>LEE testing</strong></td>
<td>Single point located at the 10% centroidal area of the duct at a port location per Method 1 at Appendix A–1 to part 60 of this chapter or Method 30B at Appendix A–8 for Method 30B point selection.</td>
</tr>
<tr>
<td>a. Select sampling ports location and the number of traverse points</td>
<td></td>
</tr>
<tr>
<td>b. Determine velocity and volumetric flow-rate of the stack gas</td>
<td>Method 2, 2A, 2C, 2F, 2G, or 2H at Appendix A–1 or A–2 to part 60 of this chapter or flow monitoring system certified per Appendix A of this subpart.</td>
</tr>
<tr>
<td>c. Determine oxygen and carbon dioxide concentrations of the stack gas</td>
<td>Method 3A or 3B at Appendix A–1 to part 60 of this chapter, or ANSI/ASME PTC 19.10–1981, or diluent gas monitoring systems certified according to Part 75 of this chapter.</td>
</tr>
<tr>
<td>d. Measure the moisture content of the stack gas</td>
<td>Method 4 at Appendix A–3 to part 60 of this chapter, or moisture monitoring systems certified according to part 75 of this chapter.</td>
</tr>
<tr>
<td>e. Measure the Hg emission concentration</td>
<td>Method 30B at Appendix A–8 to part 60 of this chapter; perform a 30 operating day test, with a maximum of 10 operating days per run (i.e., per pair of sorbent traps) or sorbent trap monitoring system or Hg CEMS certified per Appendix A of this subpart.</td>
</tr>
<tr>
<td>f. Convert emissions concentrations</td>
<td>Method 19 F-factor methodology at Appendix A–7</td>
</tr>
</tbody>
</table>

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f. The permittee may conduct the initial performance testing in accordance with §63.10005(h), to determine whether the unit qualifies as a low emitting EGU (LEE) for one or more applicable emissions limits. (§63.10000(c)(1)(i))

1) For a qualifying LEE for Hg emissions limits, the permittee shall conduct a 30-day performance test using Method 30B at least once every 12 calendar months to demonstrate continued LEE status. (§63.10000(c)(1)(ii))

2) For a qualifying LEE of any other applicable emissions limits, the permittee shall conduct a performance test at least once every 36 calendar months to demonstrate continued LEE status. (§63.10000(c)(1)(iii))

3) If the permittee’s coal-fired EGU does not qualify as a LEE for total non-mercury HAP metals, individual non-mercury HAP metals, or filterable particulate matter (PM), the permittee shall demonstrate compliance through an initial performance test and the permittee shall monitor continuous performance through either use of a particulate matter continuous parametric monitoring system (PM CPMS), a PM CEMS, or compliance performance testing repeated quarterly. (§63.10000(c)(1)(iv))

4) If the permittee’s coal-fired EGU does not qualify as a LEE for hydrogen chloride (HCl), the permittee may demonstrate initial and continuous compliance through use of an HCI CEMS, installed and operated in accordance with Appendix B to this subpart. As an alternative to HCl CEMS, the permittee may demonstrate initial and continuous compliance by conducting an initial and periodic quarterly performance stack test for HCl. If the permittee’s EGU uses wet or dry flue gas desulfurization technology (this includes limestone injection into a fluidized bed combustion unit), the permittee may apply a second alternative to HCl CEMS by installing and operating a sulfur dioxide (SO₂) CEMS installed and operated in accordance with part 75 of this chapter to demonstrate compliance with the applicable SO₂ emissions limit. (§63.10000(c)(1)(v))
5) If the permittee’s coal-fired EGU does not qualify as a LEE for Hg, the permittee shall demonstrate initial and continuous compliance through use of a Hg CEMS or a sorbent trap monitoring system, in accordance with appendix A to this subpart. (§63.10000(c)(1)(vi))

   a) (A) You may choose to use separate sorbent trap monitoring systems to comply with this subpart: One sorbent trap monitoring system to demonstrate compliance with the numeric mercury emissions limit during periods other than startup or shutdown and the other sorbent trap monitoring system to report average mercury concentration during startup periods or shutdown periods. (§63.10000(c)(1)(vi)(A))

   b) (B) You may choose to use one sorbent trap monitoring system to demonstrate compliance with the mercury emissions limit at all times (including startup periods and shutdown periods) and to report average mercury concentration. You must follow the startup or shutdown requirements that follow and as given in Table 3 to this subpart for each coal-fired, liquid oil-fired, or solid oil-derived fuel-fired EGU. (§63.10000(c)(1)(vi)(B))

g. Low emitting EGUs. The provisions of this paragraph (h) apply to pollutants with emissions limits from new EGUs except Hg and to all pollutants with emissions limits from existing EGUs. The permittee may not pursue this compliance option if the permittee’s existing EGU is equipped with an acid gas scrubber and has a main stack and bypass stack exhaust configuration. (§63.10005(h))

1) An EGU may qualify for low emitting EGU (LEE) status for Hg, HCl, HF, filterable PM, total non-Hg HAP metals, or individual non-Hg HAP metals if the permittee collects performance test data that meet the requirements of this paragraph (h), and if those data demonstrate: (§63.10005(h)(1))

   a) For all pollutants except Hg, performance test emissions results less than 50 percent of the applicable emissions limits in Table 1 or 2 to this subpart for all required testing for 3 consecutive years; or

   b) For Hg emissions from an existing EGU, either:

      i) Average emissions less than 10 percent of the applicable Hg emissions limit in Table 2 to this subpart (expressed either in units of lb/TBtu or lb/GWh); or

      ii) Potential Hg mass emissions of 29.0 or fewer pounds per year and compliance with the applicable Hg emission limit in Table 2 to this subpart (expressed either in units of lb/TBtu or lb/GWh).

2) For all pollutants except Hg, the permittee shall conduct all required performance tests described in §63.10007 to demonstrate that a unit qualifies for LEE status. (§63.10005(h)(2))

   a) When conducting emissions testing to demonstrate LEE status, the permittee shall increase the minimum sample volume specified in Table 1 or 2 nominally by a factor of two.

   b) Follow the instructions in §63.10007(e) and Table 5 to this subpart to convert the test data to the units of the applicable standard.

3) For Hg, the permittee shall conduct a 30-boiler operating day performance test using Method 30B in appendix A–8 to part 60 of this chapter to determine whether a unit qualifies for LEE status. Locate the Method 30B sampling probe tip at a point within the 10 percent centroidal area of the duct at a location that meets Method 1 in appendix A–1 to part 60 of this chapter and conduct at least three nominally equal length test runs over the 30-boiler operating day test period. You may use a pair of sorbent traps to sample the stack gas for a period consistent with that given in section 5.2.1 of appendix A to this subpart. Collect Hg emissions data continuously over the entire test period (except when changing sorbent traps or performing required reference method QA procedures). As an alternative to constant rate sampling per Method 30B, you may use proportional sampling per section 8.2.2 of Performance Specification 12 B in appendix B to part 60 of this chapter. (§63.10005(h)(3))

   a) Depending on whether the permittee intends to assess LEE status for Hg in terms of the
lb/TBtu or lb/GWh emission limit in Table 2 to this subpart or in terms of the annual Hg mass emissions limit of 29.0 lb/year, the permittee will have to collect some or all of the following data during the 30-boiler operating day test period (see paragraph (h)(3)(iii) of this section):

i) Diluent gas (CO₂ or O₂) data, using either Method 3A in appendix A–3 to part 60 of this chapter or a diluent gas monitor that has been certified according to part 75 of this chapter.

ii) Stack gas flow rate data, using either Method 2, 2F, or 2G in appendices A–1 and A–2 to part 60 of this chapter, or a flow rate monitor that has been certified according to part 75 of this chapter.

iii) Stack gas moisture content data, using either Method 4 in appendix A–1 to part 60 of this chapter, or a moisture monitoring system that has been certified according to part 75 of this chapter. Alternatively, an appropriate fuel-specific default moisture value from §75.11(b) of this chapter may be used in the calculations or the permittee may petition the Administrator or the Department under §75.66 of this chapter for use of a default moisture value for non-coal-fired units.

iv) Hourly electrical load data (megawatts), from facility records.

b) If the permittee uses CEMS to measure CO₂ (or O₂) concentration, and/or flow rate, and/or moisture, record hourly average values of each parameter throughout the 30-boiler operating day test period. If the permittee opts to use EPA reference methods rather than CEMS for any parameter, the permittee shall perform at least one representative test run on each operating day of the test period, using the applicable reference method.

c) Calculate the average Hg concentration, in µg/m³ (dry basis), for the 30-boiler operating day performance test, as the arithmetic average of all Method 30B sorbent trap results. Also calculate, as applicable, the average values of CO₂ or O₂ concentration, stack gas flow rate, stack gas moisture content, and electrical load for the test period. Then:

i) To express the test results in units of lb/TBtu, follow the procedures in §63.10007(e).

   Use the average Hg concentration and diluent gas values in the calculations.

ii) To express the test results in units of lb/GWh, use Equations A–3 and A–4 in section 6.2.2 of appendix A to this subpart, replacing the hourly values “Cₜ”, “Qₜ”, “Bₚₜ” and “(MW)ₜ” with the average values of these parameters from the performance test.

iii) To calculate pounds of Hg per year, use one of the following methods:

   (1) Multiply the average lb/TBtu Hg emission rate (determined according to paragraph (h)(3)(iii)(A) of this section) by the maximum potential annual heat input to the unit (TBtu), which is equal to the maximum rated unit heat input (TBtu/hr) times 8,760 hours. If the maximum rated heat input value is expressed in units of MMBtu/hr, multiply it by 10⁻⁴ to convert it to TBtu/hr; or

   (2) Multiply the average lb/GWh Hg emission rate (determined according to paragraph (h)(3)(iii)(B) of this section) by the maximum potential annual electricity generation (GWh), which is equal to the maximum rated electrical output of the unit (GW) times 8,760 hours. If the maximum rated electrical output value is expressed in units of MW, multiply it by 10⁻³ to convert it to GW; or

   (3) If an EGU has a federally-enforceable permit limit on either the annual heat input or the number of annual operating hours, the permittee may modify the calculations in paragraph (h)(3)(iii)(C)(1) of this section by replacing the maximum potential annual heat input or 8,760 unit operating hours with the permit limit on annual heat input or operating hours (as applicable).

   (4) For a group of affected units that vent to a common stack, the permittee may either assess LEE status for the units individually by performing a separate emission test of each unit in the duct leading from the unit to the common stack, or the permittee
may perform a single emission test in the common stack. If the permittee chooses the common stack testing option, the units in the configuration qualify for LEE status if:

(a) The emission rate measured at the common stack is less than 50 percent (10 percent for Hg) of the applicable emission limit in Table 1 or 2 to this subpart; or

(b) For Hg from an existing EGU, the applicable Hg emission limit in Table 2 to this subpart is met and the potential annual mass emissions, calculated according to paragraph (h)(3)(iii) of this section (with some modifications), are less than or equal to 29.0 pounds times the number of units sharing the common stack. Base the permittee’s calculations on the combined heat input capacity of all units sharing the stack (i.e., either the combined maximum rated value or, if applicable, a lower combined value restricted by permit conditions or operating hours).


h. For coal-fired EGUs using PM CPMS to monitor continuous performance with an applicable emission limit as provided for under §63.10000(c), the permittee shall conduct all applicable performance tests according to Table 5 to this subpart and §63.10007 at least every year. (§63.10006(a))

i. For a meeting the LEE requirements of §63.10005(h), the permittee shall repeat the performance test once every 3 years (once every year for Hg) according to Table 5 and §63.10007. Should subsequent emissions testing results show the unit does not meet the LEE eligibility requirements, LEE status is lost. If this should occur: (§63.10006(b))

1) For all pollutant emission limits except for Hg, the permittee shall conduct emissions testing quarterly, except as otherwise provided in §63.10021(d)(1). (§63.10006(b)(1))

2) For Hg, the permittee shall install, certify, maintain, and operate a Hg CEMS or a sorbent trap monitoring system in accordance with appendix A to this subpart, within 6 calendar months of losing LEE eligibility. Until the Hg CEMS or sorbent trap monitoring system is installed, certified, and operating, the permittee shall conduct Hg emissions testing quarterly, except as otherwise provided in §63.10021(d)(1). The permittee shall have 3 calendar years of testing and CEMS or sorbent trap monitoring system data that satisfy the LEE emissions criteria to reestablish LEE status. (§63.10006(b)(2), §63.10006(c))

j. Except where paragraph (b) of this section applies, for coal-fired EGUs that do not use either an HCl CEMS to monitor compliance with the HCl limit or an SO2 CEMS to monitor compliance with the alternate equivalent SO2 emission limit, the permittee shall conduct all applicable periodic HCl emissions tests according to Table 5 to this subpart and §63.10007 at least quarterly, except as otherwise provided in §63.10021(d)(1). (§63.10006(d))

k. **Time between performance tests. (§63.10006(f))**

1) (1) Notwithstanding the provisions of §63.10021(d)(1), the requirements listed in paragraphs (g) and (h) of this section, and the requirements of paragraph (f)(3) of this section, you must complete performance tests for your EGU as follows:

a) (i) At least 45 calendar days, measured from the test's end date, must separate performance tests conducted every quarter;

b) (ii) For annual testing:

   i) (A) At least 320 calendar days, measured from the test's end date, must separate
performance tests;
   ii) (B) At least 320 calendar days, measured from the test's end date, must separate annual sorbent trap mercury testing for 30-boiler operating day LEE tests;
   iii) (C) At least 230 calendar days, measured from the test's end date, must separate annual sorbent trap mercury testing for 90-boiler operating day LEE tests; and
   c) (iii) At least 1,050 calendar days, measured from the test's end date, must separate performance tests conducted every 3 years.

2) (2) For units demonstrating compliance through quarterly emission testing, you must conduct a performance test in the 4th quarter of a calendar year if your EGU has skipped performance tests in the first 3 quarters of the calendar year.

3) (3) If your EGU misses a performance test deadline due to being inoperative and if 168 or more boiler operating hours occur in the next test period, you must complete an additional performance test in that period as follows:
   a) (i) At least 15 calendar days must separate two performance tests conducted in the same quarter.
   b) (ii) At least 107 calendar days must separate two performance tests conducted in the same calendar year.
   c) (iii) At least 350 calendar days must separate two performance tests conducted in the same 3 year period.

l. If the permittee elects to demonstrate compliance using emissions averaging under §63.10009, the permittee shall continue to conduct performance stack tests at the appropriate frequency given in section (c) through (f) of this section. (§63.10006(g))

m. If a performance test on a non-mercury LEE shows emissions in excess of 50 percent of the emission limit and if the permittee chooses to reapply for LEE status, the permittee shall conduct performance tests at the appropriate frequency given in section (c) through (e) of this section for that pollutant until all performance tests over a consecutive 3-year period show compliance with the LEE criteria. (§63.10006(h))

n. Except as otherwise provided in this section, the permittee shall conduct all required performance tests according to §63.7(d), (e), (f), and (h). The permittee shall also develop a site-specific test plan according to the requirements in §63.7(c). (§63.10007(a))

1) If the permittee uses CEMS (Hg, HCl, SO₂, or other) to determine compliance with a 30-boiler operating day rolling average emission limit, the permittee shall collect quality-assured CEMS data for all unit operating conditions, including startup and shutdown (see §63.10011(g) and Table 3 to this subpart), except as otherwise provided in §63.10020(b). Emission rates determined during startup periods and shutdown periods (as defined in §63.10042) are not to be included in the compliance determinations, except as otherwise provided in §§63.10000(c)(1)(vi)(B) and 63.10005(a)(2)(iii). (§63.10007(a)(1))

2) If the permittee conducts performance testing with test methods in lieu of continuous monitoring, operate the unit at maximum normal operating load conditions during each periodic (e.g., quarterly) performance test. Maximum normal operating load shall be generally between 90 and 110 percent of design capacity but should be representative of site specific normal operations during each test run. (§63.10007(a)(2))

3) For establishing operating limits with particulate matter continuous parametric monitoring system (PM CPMS) to demonstrate compliance with a PM or non Hg metals emissions limit, operate the unit at maximum normal operating load conditions during the performance test period. Maximum normal operating load shall be generally between 90 and 110 percent of design capacity but should be representative of site specific normal operations during each test.
run. (§63.10007(a)(3))

o. The permittee shall conduct each performance test (including traditional 3-run stack tests, 30-boiler operating day tests based on CEMS data (or sorbent trap monitoring system data), and 30-boiler operating day Hg emission tests for LEE qualification) according to the requirements in Table 5 to this subpart. (§63.10007(b))

p. If the permittee chooses to comply with the filterable PM emission limit and demonstrate continuous performance using a PM CPMS for an applicable emission limit as provided for in §63.10000(c), the permittee shall also establish an operating limit according to §63.10011(b) and Tables 4 and 6 to this subpart. Should the permittee desire to have operating limits that correspond to loads other than maximum normal operating load, the permittee shall conduct testing at those other loads to determine the additional operating limits. (§63.10007(c))

q. Except for a 30-boiler operating day performance test based on CEMS (or sorbent trap monitoring system) data, where the concept of test runs does not apply, the permittee shall conduct a minimum of three separate test runs for each performance test, as specified in §63.7(e)(3). Each test run shall comply with the minimum applicable sampling time or volume specified in Table 1 or 2 to this subpart. Sections 63.10005(d) and (h), respectively, provide special instructions for conducting performance tests based on CEMS or sorbent trap monitoring systems, and for conducting emission tests for LEE qualification. (§63.10007(d))

r. To use the results of performance testing to determine compliance with the applicable emission limits in Table 1 or 2 to this subpart, proceed as follows: (§63.10007(e))

1) Except for a 30-boiler operating day performance test based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), the permittee shall use the method detection level as the measured emissions level for that pollutant in calculating compliance. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 29 fractions both for individual HAP metals and for total HAP metals) may include a combination of method detection level data and analytical data reported above the method detection level. (§63.10007(e)(1))

2) If the limits are expressed in lb/MMBtu or lb/TBtu, the permittee shall use the F-factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 in appendix A–7 to part 60 of this chapter. In cases where an appropriate F-factor is not listed in Table 19–2 of Method 19, the permittee may use F-factors from Table 1 in section 3.3.5 of appendix F to part 75 of this chapter, or F-factors derived using the procedures in section 3.3.6 of appendix F to part 75 of this chapter. Use the following factors to convert the pollutant concentrations measured during the initial performance tests to units of lb/scf, for use in the applicable Method 19 equations: (§63.10007(e)(2))
   a) Multiply SO\(_2\) ppm by \(1.66 \times 10^{-7}\);
   b) Multiply HCl ppm by \(9.43 \times 10^{-8}\);
   c) Multiply HF ppm by \(5.18 \times 10^{-4}\);
   d) Multiply HAP metals concentrations (ng/dscm) by \(6.24 \times 10^{-8}\); and
   e) Multiply Hg concentrations (\(\mu g/dscm\)) by \(6.24 \times 10^{-11}\).

3) To determine compliance with emission limits expressed in lb/MWh or lb/GWh, the permittee shall first calculate the pollutant mass emission rate during the performance test, in units of lb/h. For Hg, if a CEMS or sorbent trap monitoring system is used, use Equation A–2 or A–3
in appendix A to this subpart (as applicable). In all other cases, use an equation that has the
general form of Equation A–2 or A–3, replacing the value of K with $1.66 \times 10^{-7}$/lb/scf-ppm for
SO$_2$, $9.43 \times 10^{-6}$/lb/scf-ppm for HCl (if an HCl CEMS is used), $5.18 \times 10^{-8}$/lb/scf-ppm for HF
(if an HF CEMS is used), or $6.24 \times 10^{-8}$/lb-scm/mg-scf for HAP metals and for HCl and HF
(when performance stack testing is used), and defining $C_g$ as the average SO$_2$, HCl, or HF
concentration in ppm, or the average HAP metals concentration in mg/dscm. This calculation
requires stack gas volumetric flow rate (scfh) and (in some cases) moisture content data (see
§§63.10005(h)(3) and 63.10010). Then, if the applicable emission limit is in units of lb/GWh,
use Equation A–4 in appendix A to this subpart to calculate the pollutant emission rate in
lb/GWh. In this calculation, define $(M)_h$ as the calculated pollutant mass emission rate for the
performance test (lb/h), and define $(M)_{W_h}$ as the average electrical load during the performance
test (megawatts). If the applicable emission limit is in lb/MWh rather than lb/GWh, omit the
$10^3$ term from Equation A–4 to determine the pollutant emission rate in lb/MWh.

§63.10007(e)(3)

(f) If you elect to (or are required to) use CEMS to continuously monitor Hg, HCl, HF, SO$_2$, or PM
emissions (or, if applicable, sorbent trap monitoring systems to continuously collect Hg emissions
data), the following default values are available for use in the emission rate calculations during
startup periods or shutdown periods (as defined in §63.10042). For the purposes of this subpart,
these default values are not considered to be substitute data.

1) (1) Diluent cap values. If you use CEMS (or, if applicable, sorbent trap monitoring systems) to
comply with a heat input-based emission rate limit, you may use the following diluent cap
values for a startup or shutdown hour in which the measured CO$_2$ concentration is below the
cap value or the measured O$_2$ concentration is above the cap value:
   a) (i) For an IGCC EGU, you may use 1% for CO$_2$ or 19% for O$_2$.
   b) (ii) For all other EGUs, you may use 5% for CO$_2$ or 14% for O$_2$.

2) (2) Default gross output. If you use CEMS to continuously monitor Hg, HCl, HF, SO$_2$, or PM
emissions (or, if applicable, sorbent trap monitoring systems to continuously collect Hg
emissions data), the following default value is available for use in the emission rate calculations
during startup periods or shutdown periods (as defined in §63.10042). For the purposes of this
subpart, this default value is not considered to be substitute data. For a startup or shutdown
hour in which there is heat input to an affected EGU but zero gross output, you must calculate
the pollutant emission rate using a value equivalent to 5% of the maximum sustainable gross
output, expressed in megawatts, as defined in section 6.5.2.1(a)(1) of appendix A to part 75 of
this chapter. This default gross output is either the nameplate capacity of the EGU or the highest
gross output observed in at least four representative quarters of EGU operation. For a monitored
common stack, the default gross output is used only when all EGUs are operating
(i.e., combusting fuel) are in startup or shutdown mode, and have zero electrical generation.
Under those conditions, a default gross output equal to 5% of the combined maximum
sustainable gross output of the EGUs that are operating but have a total of zero gross output
must be used to calculate the hourly gross output-based pollutant emissions rate.

(t) Upon request, the permittee shall make available to the EPA Administrator or the Department such
records as may be necessary to determine whether the performance tests have been done according
to the requirements of this section. (§63.10007(g))

(u) If the permittee is subject to an operating limit in Table 4 to this subpart, the permittee demonstrates
initial compliance with HAP metals or filterable PM emission limit(s) through performance stack
tests and the permittee elects to use a PM CPMS to demonstrate continuous performance, the
permittee shall also establish a site-specific operating limit, in accordance with Table 4 to this
subpart, §63.10007, and Table 6 to this subpart. The permittee may use only the parametric data recorded during successful performance tests (i.e., tests that demonstrate compliance with the applicable emissions limits) to establish an operating limit. (§63.10011(b))

v. (c)(1) If you use CEMS or sorbent trap monitoring systems to measure a HAP (e.g., Hg or HCl) directly, the initial performance test shall consist of a 30-boiler operating day (or, for certain coal-fired, existing EGUs that use emissions averaging for Hg, a 90-boiler operating day) rolling average emissions rate obtained with a certified CEMS or sorbent trap system, expressed in units of the standard. If the monitoring system is certified prior to the applicable compliance date, the initial averaging period shall either begin with: The first boiler operating day on or after the compliance date; or 30 (or, if applicable, 90) boiler operating days prior to that date, as described in §63.10005(b). In all cases, the initial 30- or 90-boiler operating day averaging period must be completed on or before the date that compliance must be demonstrated, in accordance with §63.9984(f). Initial compliance is demonstrated if the results of the performance test meet the applicable emission limit in Table 1 or 2 to this subpart. (§63.10011(c)(1))

w. (2) For an EGU that uses a CEMS to measure SO₂ or PM emissions for initial compliance, the initial performance test shall consist of a 30-boiler operating day average emission rate obtained with certified CEMS, expressed in units of the standard. If the monitoring system is certified prior to the applicable compliance date, the initial averaging period shall either begin with: The first boiler operating day on or after the compliance date; or 30 boiler operating days prior to that date, as described in §63.10005(b). In all cases, the initial 30- boiler operating day averaging period must be completed on or before the date that compliance must be demonstrated, in accordance with §63.9984(f). Initial compliance is demonstrated if the results of the performance test meet the applicable SO₂ or PM emission limit in Table 1 or 2 to this subpart. (§63.10011(c)(2))

x. For candidate LEE units, use the results of the performance testing described in §63.10005(h) to determine initial compliance with the applicable emission limit(s) in Table 1 or 2 to this subpart and to determine whether the unit qualifies for LEE status. (§63.10011(d))

y. The permittee shall submit a Notification of Compliance Status containing the results of the initial compliance demonstration, according to §63.10030(e). (§63.10011(e))

z. When the permittee is required to conduct a performance test, 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. (§63.10030(d))

3. Monitoring Requirements

a. The permittee shall meet each applicable operating limit in Table 4 of 40 CFR Part 63 Subpart UUUUU. (§63.9991(a)(2))

1) For demonstrating compliance using PM CPMS, the permittee shall maintain the 30-boiler operating day rolling average PM CPMS output at or below the highest 1-hour average measured during the most recent performance test demonstrating compliance with the filterable PM, total non-mercury HAP metals, or individual non-mercury HAP metals emissions limitation(s). (Table 4 to Subpart UUUUU of Part 63, §63.9991)

b. The permittee shall demonstrate continuous compliance with the emissions limitations in Condition
V.M.1.b above according to the following in Table V.M.4: (§63.10021(a), Table 7 of 40 CFR Part 63 Subpart UUUUUU)

**TABLE V.M.4**

<table>
<thead>
<tr>
<th>If the permittee uses one of the following to meet applicable emissions limits, operating limits, or work practice standards . . .</th>
<th>The permittee shall demonstrate continuous compliance by . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEMS to measure filterable PM, SO\textsubscript{2}, HCl, HF, or Hg emissions, or using a sorbent trap monitoring system to measure Hg</td>
<td>Calculating the 30- (or 90-) boiler operating day rolling arithmetic average emissions rate in units of the applicable emissions standard basis at the end of each boiler operating day using all of the quality assured hourly average CEMS or sorbent trap data for the previous 30 boiler operating days, excluding data recorded during periods of startup or shutdown.</td>
</tr>
<tr>
<td>PM CPMS to measure compliance with a parametric operating limit</td>
<td>Calculating the arithmetic 30-boiler operating day rolling average of all of the quality assured hourly average PM CPMS output data (e.g., millamps, PM concentration, raw data signal) collected for all operating hours for the previous 30 boiler operating days, excluding data recorded during periods of startup or shutdown.</td>
</tr>
<tr>
<td>Quarterly performance testing for coal-fired units to measure compliance with one or more applicable emissions limit in Table 1 or 2</td>
<td>Calculating the results of the testing in units of the applicable emissions standard.</td>
</tr>
<tr>
<td>Conducting periodic performance tune-ups of the permittee’s EGU(s)</td>
<td>Conducting periodic performance tune-ups of the permittee’s EGU(s), as specified in §63.10021(e).</td>
</tr>
<tr>
<td>Work practice standards for coal-fired EGUs during startup</td>
<td>Operating in accordance with Table 3.</td>
</tr>
<tr>
<td>Work practice standards for coal-fired EGUs during shutdown</td>
<td>Operating in accordance with Table 3.</td>
</tr>
</tbody>
</table>

c. If the permittee demonstrates compliance with any applicable emissions limit through use of a continuous monitoring system (CMS), where a CMS includes a continuous parameter monitoring system (CPMS) as well as a continuous emissions monitoring system (CEMS), the permittee shall develop a site-specific monitoring plan and submit this site-specific monitoring plan, if requested, at least 60 days before the permittee's initial performance evaluation (where applicable) of the permittee's CMS. This requirement also applies to the permittee if the permittee petitions the Administrator or the Department for alternative monitoring parameters under §63.8(f). This requirement to develop and submit a site-specific monitoring plan does not apply to affected sources with existing monitoring plans that apply to CEMS and CPMS prepared under Appendix B to part 60 or part 75 of this chapter, and that meet the requirements of §63.10010. Using the process described in §63.8(f)(4), the permittee may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in this paragraph of this section and, if approved, include those in the permittee's site-specific monitoring plan. The monitoring plan shall address the provisions in paragraphs (d)(2) through (5) of this section. (§63.10000(d)(1))

d. The site-specific monitoring plan shall include the information specified in paragraphs (d)(5)(i) through (d)(5)(vii) of this section. Alternatively, the requirements of paragraphs (d)(5)(i) through (d)(5)(vii) are considered to be met for a particular CMS or sorbent trap monitoring system if:
§63.10000(d)(2))
1) (i) The CMS or sorbent trap monitoring system is installed, certified, maintained, operated, and quality-assured either according to part 75 of this chapter, or appendix A or B to this subpart; and
2) (ii) The recordkeeping and reporting requirements of part 75 of this chapter, or appendix A or B to this subpart, that pertain to the CMS are met.

c. If requested by the Administrator or the Department, the permittee shall submit the monitoring plan (or relevant portion of the plan) at least 60 days before the initial performance evaluation of a particular CMS, except where the CMS has already undergone a performance evaluation that meets the requirements of §63.10010 (e.g., if the CMS was previously certified under another program). (§63.10000(d)(3))

f. The permittee shall operate and maintain the CMS according to the site-specific monitoring plan. (§63.10000(d)(4))

g. The provisions of the site-specific monitoring plan shall address the following items: (§63.10000(d)(5))
1) Installation of the CMS or sorbent trap monitoring system 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). See §63.10010(a) for further details. For PM CPMS installations, follow the procedures in §63.10010(h).
2) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems.
3) Schedule for conducting initial and periodic performance evaluations.
4) Performance evaluation procedures and acceptance criteria (e.g., calibrations), including the quality control program in accordance with the general requirements of §63.8(d).
5) On-going operation and maintenance procedures, in accordance with the general requirements of §§63.8(c)(1)(ii), (c)(3), and (e)(4)(ii).
6) Conditions that define a CMS that is out of control consistent with §63.8(c)(7)(i) and for responding to out of control periods consistent with §§63.8(c)(7)(ii) and (c)(8).
7) On-going recordkeeping and reporting procedures, in accordance with the general requirements of §§63.10(c), (e)(1), and (e)(2)(i), or as specifically required under this subpart.

h. All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of operations that cause the permittee’s EGU to meet the definition of an EGU subject to this subpart shall be installed and operational as of the date the permittee’s source ceases to be or becomes subject to this subpart. All calibration and drift checks shall be performed as of the date the permittee’s source ceases to be or becomes subject to this subpart. The permittee shall also comply with provisions of §§63.10010, 63.10020, and 63.10021 of this subpart. Relative accuracy tests shall be performed as of the performance test deadline for PM CEMS, if applicable. Relative accuracy testing for other CEMS need not be repeated if that testing was previously performed consistent with CAA section 112 monitoring requirements or monitoring requirements under this subpart. (§63.10000(k))

i. CMS requirements. If, for a particular emission or operating limit, the permittee is required to (or elect to) demonstrate initial compliance using a continuous monitoring system, the CMS shall pass a performance evaluation prior to the initial compliance demonstration. If a CMS has been
previously certified under another state or federal program and is continuing to meet the on-going quality-assurance (QA) requirements of that program, then, provided that the certification and QA provisions of that program meet the applicable requirements of §§63.10010(b) through (h), an additional performance evaluation of the CMS is not required under this subpart. (§63.10005(d))

1) For an affected coal-fired EGU, the permittee may demonstrate initial compliance with the applicable SO₂, HCl, or HF emissions limit in Table 1 or 2 to this subpart through use of an SO₂, HCl, or HF CEMS installed and operated in accordance with part 75 of this chapter or Appendix B to this subpart, as applicable. The permittee may also demonstrate compliance with a filterable PM emission limit in Table 1 or 2 to this subpart through use of a PM CEMS installed, certified, and operated in accordance with §63.10010(i). Initial compliance is achieved if the arithmetic average of 30-boiler operating days of quality-assured CEMS data, expressed in units of the standard (see §63.10007(e)), meets the applicable SO₂, PM, HCl, or HF emissions limit in Table 1 or 2 to this subpart. Use Equation 19–19 of Method 19 in appendix A–7 to part 60 of this chapter to calculate the 30-boiler operating day average emissions rate. (Note: For this calculation, the term \( E_b \) in Equation 19–19 shall be in the same units of measure as the applicable HCl or HF emission limit in Table 1 or 2 to this subpart). (§63.10005(d)(1))

2) For affected coal-fired EGUs that demonstrate compliance with the applicable emission limits for total non-mercury HAP metals, individual non-mercury HAP metals, total HAP metals, individual HAP metals, or filterable PM listed in Table 1 or 2 to this subpart using initial performance testing and continuous monitoring with PM CPMS: (§63.10005(d)(2))
   a) The permittee shall demonstrate initial compliance no later than the applicable date specified in §63.9984(f) for existing EGUs and in paragraph (g) of this section for new EGUs.
   b) The permittee shall demonstrate continuous compliance with the PM CPMS site-specific operating limit that corresponding to the results of the performance test demonstrating compliance with the pollutant with which the permittee chooses to comply.
   c) The permittee shall repeat the performance test annually for the selected pollutant emissions limit and reassert and adjust the site-specific operating limit in accordance with the results of the performance test.

3) For affected EGUs that are either required to or elect to demonstrate initial compliance with the applicable Hg emission limit in Table 1 or 2 of this subpart using Hg CEMS or sorbent trap monitoring systems, initial compliance shall be demonstrated no later than the applicable date specified in §63.9984(f) for existing EGUs and in paragraph (g) of this section for new EGUs. Initial compliance is achieved if the arithmetic average of 30-boiler operating days of quality-assured CEMS (or sorbent trap monitoring system) data, expressed in units of the standard (see section 6.2 of appendix A to this subpart), meets the applicable Hg emission limit in Table 1 or 2 to this subpart. (§63.10005(d)(3))

   j. **Single unit-single stack configurations.** For an affected unit that exhausts to the atmosphere through a single, dedicated stack, the permittee shall either install the required CEMS, PM CPMS, and sorbent trap monitoring systems in the stack or at a location in the ductwork downstream of all emissions control devices, where the pollutant and diluents concentrations are representative of the emissions that exit to the atmosphere. (§63.10010(a)(1))

   k. If the permittee uses an oxygen (O₂) or carbon dioxide (CO₂) CEMS to convert measured pollutant concentrations to the units of the applicable emissions limit, the O₂ or CO₂ concentrations shall be monitored at a location that represents emissions to the atmosphere, i.e., at the outlet of the EGU, downstream of all emission control devices. The permittee shall install, certify, maintain, and
operate the CEMS according to part 75 of this chapter. Use only quality-assured O\textsubscript{2} or CO\textsubscript{2} data in the emissions calculations; do not use part 75 substitute data values. (§63.10010(b))

l. If the permittee is required to use a stack gas flow rate monitor, either for routine operation of a sorbent trap monitoring system or to convert pollutant concentrations to units of an electrical output-based emission standard in Table 1 or 2 to this subpart, the permittee shall install, certify, operate, and maintain the monitoring system and conduct on-going quality-assurance testing of the system according to part 75 of this chapter. Use only unadjusted, quality-assured flow rate data in the emissions calculations. Do not apply bias adjustment factors to the flow rate data and do not use substitute flow rate data in the calculations. (§63.10010(c))

m. If the permittee is required to make corrections for stack gas moisture content when converting pollutant concentrations to the units of an emission standard in Table 1 of 2 to this subpart, the permittee shall install, certify, operate, and maintain a moisture monitoring system in accordance with part 75 of this chapter. Alternatively, for coal-fired units, the permittee may use appropriate fuel-specific default moisture values from §75.11(b) of this chapter to estimate the moisture content of the stack gas or the permittee may petition the Administrator or the Department under §75.66 of this chapter for use of a default moisture value for non-coal-fired units. If the permittee installs and operate a moisture monitoring system, do not use substitute moisture data in the emissions calculations. (§63.10010(d))

n. If the permittee uses an HCl and/or HF CEMS, the permittee shall install, certify, operate, maintain, and quality-assure the data from the monitoring system in accordance with appendix B to this subpart. Calculate and record a 30-boiler operating day rolling average HCl or HF emission rate in the units of the standard, updated after each new boiler operating day. Each 30-boiler operating day rolling average emission rate is the average of all the valid hourly HCl or HF emission rates in the preceding 30 boiler operating days (see section 9.4 of appendix B to this subpart). (§63.10010(e))

o. If the permittee uses an SO\textsubscript{2} CEMS, the permittee shall install the monitor at the outlet of the EGU, downstream of all emission control devices, and the permittee shall certify, operate, and maintain the CEMS according to part 75 of this chapter. (§63.10010(f)(1))

1) For on-going QA, the SO\textsubscript{2} CEMS shall meet the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: The permittee shall perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the SO\textsubscript{2} CEMS has a span value of 30 ppm or less. (§63.10010(f)(2))

2) Calculate and record a 30-boiler operating day rolling average SO\textsubscript{2} emission rate in the units of the standard, updated after each new boiler operating day. Each 30-boiler operating day rolling average emission rate is the average of all of the valid SO\textsubscript{2} emission rates in the preceding 30 boiler operating days. (§63.10010(f)(3))

3) Use only unadjusted, quality-assured SO\textsubscript{2} concentration values in the emissions calculations; do not apply bias adjustment factors to the part 75 SO\textsubscript{2} data and do not use part 75 substitute data values. (§63.10010(f)(4))

p. If the permittee uses a Hg CEMS or a sorbent trap monitoring system, the permittee shall install, certify, operate, maintain and quality-assure the data from the monitoring system in accordance with appendix A to this subpart. The permittee shall calculate and record a 30- (or, if alternate emissions averaging is used, 90-) boiler operating day rolling average Hg emission rate, in units of the standard, updated after each new boiler operating day. Each 30- (or, if alternate emissions...
If the permittee uses a PM CPMS to demonstrate continuous compliance with an operating limit, the permittee shall install, calibrate, maintain, and operate the PM CPMS and record the output of the system as specified in paragraphs (h)(1) through (5) of this section. (§63.10010(h))

1) Install, calibrate, operate, and maintain the permittee’s PM CPMS according to the procedures in the permittee’s approved site-specific monitoring plan developed in accordance with §63.10000(d), and meet the requirements in paragraphs (h)(1)(i) through (iii) of this section. (§63.10010(h)(1))
   a) The operating principle of the PM CPMS shall be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of the exhaust gas or representative sample. The reportable measurement output from the PM CPMS may be expressed as milliamps, stack concentration, or other raw data signal.
   b) The PM CPMS shall have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.
   c) The PM CPMS shall be capable, at a minimum, of detecting and responding to particulate matter concentrations of 0.5 mg/acm.

2) For a new unit, complete the initial PM CPMS performance evaluation no later than October 13, 2012 or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than October 13, 2015. (§63.10010(h)(2))

3) Collect PM CPMS hourly average output data for all boiler operating hours except as indicated in paragraph (h)(5) of this section. Express the PM CPMS output as milliamps, PM concentration, or other raw data signal value. (§63.10010(h)(3))

4) Calculate the arithmetic 30-boiler operating day rolling average of all of the hourly average PM CPMS output collected during all nonexempt boiler operating hours data (e.g., milliamps, PM concentration, raw data signal). (§63.10010(h)(4))

5) The permittee shall collect data using the PM CPMS at all times the process unit is operating and at the intervals specified in paragraph (h)(1)(ii) of this section, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in the permittee’s site-specific monitoring plan. (§63.10010(h)(5))

6) The permittee shall use all the data collected during all boiler operating hours in assessing the compliance with the permittee’s operating limit except: (§63.10010(h)(6))
   a) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions are not used in calculations (report any such periods in the permittee’s annual deviation report);
   b) Any data collected during periods when the monitoring system is out of control as specified in the permittee’s site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods are not used in calculations (report emissions or operating levels and report any such periods in the permittee’s annual deviation report);
   c) Any data recorded during periods of startup or shutdown.
7) The permittee shall record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with the permittee’s site-specific monitoring plan. (§63.10010(h)(7))
   
a) If the permittee chooses to comply with the PM filterable emissions limit in lieu of metal HAP limits, the permittee may choose to install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (i)(1) through (5) of this section. The compliance limit shall be expressed as a 30-boiler operating day rolling average of the numerical emissions limit value applicable for the permittee’s unit in tables 1 or 2 to this subpart. (§63.10010(h)(7)(i))
   
i) Install and certify the permittee’s PM CEMS according to the procedures and requirements in Performance Specification 11—Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to part 60 of this chapter, using Method 5 at Appendix A–3 to part 60 of this chapter and ensuring that the front half filter temperature shall be 160°F ± 14 °C (320°F ± 25 °F). The reportable measurement output from the PM CEMS shall be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh). (§63.10010(h)(7)(i)(1))
   
ii) Operate and maintain the permittee’s PM CEMS according to the procedures and requirements in Procedure 2—Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to part 60 of this chapter. (§63.10010(h)(7)(i)(2))
   (1) The permittee shall conduct the relative response audit (RRA) for the permittee’s PM CEMS at least once annually.
   (2) The permittee shall conduct the relative correlation audit (RCA) for the permittee’s PM CEMS at least once every 3 years.
   
iii) Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (i) of this section. (§63.10010(h)(7)(i)(3))
   
iv) Calculate the arithmetic 30-boiler operating day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler operating hours. (§63.10010(h)(7)(i)(4))
   
v) The permittee shall collect data using the PM CEMS at all times the process unit is operating and at the intervals specified in paragraph (a) of this section, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities. (§63.10010(h)(7)(i)(5))
   (1) The permittee shall use all the data collected during all boiler operating hours in assessing the compliance with the permittee’s operating limit except:
      (a) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions or used in calculations and report any such periods in the permittee’s annual deviation report;
      (b) Any data collected during periods when the monitoring system is out of control as specified in the permittee’s site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out of control periods in calculations used to report emissions or operating levels and report any such periods in the permittee’s annual deviation report;
      (c) Any data recorded during periods of startup or shutdown.
The permittee may choose to comply with the metal HAP emissions limits using CEMS approved in accordance with §63.7(f) as an alternative to the performance test method specified in this rule. If approved to use a HAP metals CEMS, the compliance limit shall be expressed as a 30-boiler operating day rolling average of the numerical emissions limit value applicable for the permittee’s unit in tables 1 or 2. If approved, the permittee may choose to install, certify, operate, and maintain a HAP metals CEMS and record the output of the HAP metals CEMS as specified in paragraphs (j)(1) through (5) of this section. (§63.10010(j))

1) Install and certify the permittee’s HAP metals CEMS according to the procedures and requirements in the permittee’s approved site specific test plan as required in §63.7(e). The reportable measurement output from the HAP metals CEMS shall be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh) and in the form of a 30-boiler operating day rolling average. (§63.10010(j)(1))
   a) Operate and maintain the permittee’s HAP metals CEMS according to the procedures and criteria in the permittee’s site specific performance evaluation and quality control program plan required in §63.8(d). (§63.10010(j)(1)(i))

2) Collect HAP metals CEMS hourly average output data for all boiler operating hours except as indicated in section (j)(4) of this section. (§63.10010(j)(2))

3) Calculate the arithmetic 30-boiler operating day rolling average of all of the hourly average HAP metals CEMS output data collected during all nonexempt boiler operating hours data. (§63.10010(j)(3))

4) The permittee shall collect data using the HAP metals CEMS at all times the process unit is operating and at the intervals specified in paragraph (a) of this section, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities. (§63.10010(j)(4))
   a) The permittee shall use all the data collected during all boiler operating hours in assessing the compliance with the permittee’s emission limit except: (§63.10010(j)(4)(i))
      i) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions in calculations and report any such periods in the permittee’s annual deviation report;
      ii) Any data collected during periods when the monitoring system is out of control as specified in the permittee’s site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out of control periods in calculations used to report emissions or operating levels and report any such periods in the permittee’s annual deviation report;
      iii) Any data recorded during periods of startup or shutdown.
   b) The permittee shall record and make available upon request results of HAP metals CEMS system performance audits, dates and duration of periods when the HAP metals CEMS is out of control to completion of the corrective actions necessary to return the HAP metals CEMS to operation consistent with the permittee’s site-specific performance evaluation and quality control program plan. (§63.10010(j)(4)(ii))

5) The permittee shall operate the monitoring system and collect data at all required intervals at all
times that the affected EGU is operating, except for periods of monitoring system malfunctions or out-of-control periods (see §63.8(c)(7) of this part), and required monitoring system quality assurance or quality control activities, including, as applicable, calibration checks and required zero and span adjustments. The permittee is required to affect monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable. (§63.10020(b))

t. The permittee may not use data recorded during EGU startup or shutdown or monitoring system malfunctions or monitoring system out-of-control periods, repairs associated with monitoring system malfunctions or monitoring system out-of-control periods, or required monitoring system quality assurance or control activities in calculations used to report emissions 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. (§63.10020(c))

u. Except for periods of monitoring system malfunctions or monitoring system out-of-control periods, repairs associated with monitoring system malfunctions or monitoring system out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments), failure to collect required data is a deviation from the monitoring requirements. (§63.10020(d))

v. Except as otherwise provided in §63.10020(c), if the permittee uses a CEMS to measure SO₂, PM, HCl, HF, or Hg emissions, or using a sorbent trap monitoring system to measure Hg emissions, the permittee shall demonstrate continuous compliance by using all quality-assured hourly data recorded by the CEMS (or sorbent trap monitoring system) and the other required monitoring systems (e.g., flow rate, CO₂, O₂, or moisture systems) to calculate the arithmetic average emissions rate in units of the standard on a continuous 30-boiler operating day (or, if alternate emissions averaging is used for Hg, 90-boiler operating day) rolling average basis, updated at the end of each new boiler operating day. Use Equation 8 to determine the 30- (or, if applicable, 90-) boiler operating day rolling average. (§63.10021(b))

\[
\text{Boiler operating day average} = \frac{\sum_{i=1}^{n} H_{ri}}{n} \quad \text{(Eq. 8)}
\]

Where:

\(H_{ri}\) is the hourly emissions rate for hour \(i\) and \(n\) is the number of hourly emissions rate values collected over 30- (or, if applicable, 90-) boiler operating days.

w. If the permittee uses a PM CPMS data to measure compliance with an operating limit in Table 4 to this subpart, the permittee shall record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. The permittee shall demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (e.g., milliamps, PM concentration, raw data signal) on a 30 operating day rolling average basis, updated at the end of each new boiler operating day. Use Equation 9 to determine the 30 boiler operating day average. (§63.10021(c))

\[
\text{30 boiler operating day average} = \frac{\sum_{i=1}^{n} H_{pi}}{n} \quad \text{(Eq. 9)}
\]

Where:
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Hpv is the hourly parameter value for hour i and n is the number of valid hourly parameter values collected over 30 boiler operating days.

x. If the permitee uses quarterly performance testing to demonstrate compliance with one or more applicable emissions limits in Table 1 or 2 to this subpart, the permitee (§63.10021(d))

1) May skip performance testing in those quarters during which less than 168 boiler operating hours occur, except that a performance test shall be conducted at least once every calendar year. (§63.10021(d)(1))
2) Shall conduct the performance test as defined in Table 5 to this subpart and calculate the results of the testing in units of the applicable emissions standard. (§63.10021(d)(2))

y. During the initial performance test or any such subsequent performance test that demonstrates compliance with the filterable PM, individual non-mercury HAP metals, or total non-mercury HAP metals limit in Table 1 or 2, record all hourly average output values (e.g., milliamps, stack concentration, or other raw data signal) from the PM CPMS for the periods corresponding to the test runs (e.g., nine 1-hour average PM CPMS output values for three 3-hour test runs). (§63.10023(a))

z. Determine the permitee’s operating limit as the highest 1-hour average PM CPMS output value recorded during the performance test. The permitee shall verify an existing or establish a new operating limit after each repeated performance test. (§63.10023(b))

aa. The permitee shall operate and maintain the permitee’s process and control equipment such that the 36 operating day average PM CPMS output does not exceed the operating limit determined in paragraphs (a) and (b) of this section. (§63.10023(c))

4. Record Keeping Requirements

a. The permitee shall keep records according to paragraphs (a)(1) and (2) of this section. If the permitee is required to (or elect to) continuously monitor Hg and/or HCl and/or HF emissions, the permitee shall also keep the records required under appendix A and/or appendix B to this subpart. (§63.10032(a))

1) A copy of each notification and report that the permitee submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semianual compliance report that the permitee submitted, according to the requirements in §63.10(b)(2)(xiv). (§63.10032(a)(1))
2) Records of performance stack tests, fuel analyses, or other compliance demonstrations and performance evaluations, as required in §63.10(b)(2)(viii). (§63.10032(a)(2))

b. For each CEMS and CPMS, the permitee shall keep records according to paragraphs (b)(1) through (4) of this section. (§63.10032(b))

1) Records described in §63.10(b)(2)(vi) through (xi). (§63.10032(b)(1))
2) Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3). (§63.10032(b)(2))
3) Request for alternatives to relative accuracy test for CEMS as required in §63.8(d)(6)(i). (§63.10032(b)(3))
4) 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. (§63.10032(b)(4))

c. The permittee shall keep the records required in Table 7 to this subpart including records of all monitoring data and calculated averages for applicable PM CPMS operating limits to show continuous compliance with each emission limit and operating limit that applies to the permittee. (§63.10032(c))

d. For each EGU subject to an emission limit, the permittee shall also keep the records in paragraphs (d)(1) through (3) of this section. (§63.10032(d))

1) The permittee shall keep records of monthly fuel use by each EGU, including the type(s) of fuel and amount(s) used. (§63.10032(d)(1))

2) If the permittee combusts non-hazardous secondary materials that have been determined not to be solid waste pursuant to 40 CFR 241.3(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 satisfies the definition of processing in 40 CFR 241.2. If the fuel received a non-waste determination pursuant to the petition process submitted under 40 CFR 241.3(c), the permittee shall keep a record which documents how the fuel satisfies the requirements of the petition process. (§63.10032(d)(2))

3) For an EGU that qualifies as an LEE under §63.10005(h), the permittee shall keep annual records that document that the permittee’s emissions in the previous stack test(s) continue to qualify the unit for LEE status for an applicable pollutant, 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 pollutant to increase within the past year. (§63.10032(d)(3))

e. If the permittee elects to average emissions consistent with §63.10009, the permittee shall additionally keep a copy of the emissions averaging implementation plan required in §63.10009(g), all calculations required under §63.10009, including daily records of heat input or steam generation, as applicable, and monitoring records consistent with §63.10022. (§63.10032(e))

f. The permittee shall keep records of the occurrence and duration of each startup and/or shutdown. (§63.10032(f))

g. The permittee shall keep records of the occurrence and duration of each malfunction of an operation (i.e., process equipment) or the air pollution control and monitoring equipment. (§63.10032(g))

h. The permittee shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with §63.10000(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. (§63.10032(h))

i. The permittee shall keep records of the type(s) and amount(s) of fuel used during each startup or shutdown. (§63.10032(h)(i))

j. The permittee’s records shall be in a form suitable and readily available for expeditious review,
according to §63.10(b)(1). (§63.10033(a))

k. As specified in §63.10(b)(1), the permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. (§63.10033(b))

l. The permittee shall keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). The permittee can keep the records off site for the remaining 3 years. (§63.10033(c))

5. Reporting Requirements

a. The permittee shall submit each report in Table 8 to this subpart that applies to the permittee. If the permittee is required to (or elect to) continuously monitor Hg and/or HCl and/or HF emissions, the permittee shall also submit the electronic reports required under appendix A and/or appendix B to the subpart, at the specified frequency. (§63.10031(a))

b. Unless the Administrator or the Department has approved a different schedule for submission of reports under §63.10(a), the permittee shall submit each report by the date in Table 8 to this subpart and according to the requirements in paragraphs (b)(1) through (5) of this section. (§63.10031(b))
   1) The first compliance report shall cover the period beginning on the compliance date that is specified for the permittee’s affected source in §63.9984 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for the permittee’s source in §63.9984. (§63.10031(b)(1))
   2) The first compliance report shall be postmarked or submitted electronically no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for the permittee’s source in §63.9984. (§63.10031(b)(2))
   3) Each subsequent compliance report shall cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. (§63.10031(b)(3))
   4) Each subsequent compliance report shall be postmarked or submitted electronically no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. (§63.10031(b)(4))
   5) For each affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this chapter, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(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 according to the dates in paragraphs (b)(1) through (4) of this section. (§63.10031(b)(5))

c. The compliance report shall contain the information required in paragraphs (c)(1) through (4) of this section. (§63.10031(c))
   1) The information required by the summary report located in 63.10(e)(3)(vi). (§63.10031(c)(1))
   2) 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 permittee’s basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure. (§63.10031(c)(2))
   3) Indicate whether the permittee burned new types of fuel during the reporting period. If the permittee did burn new types of fuel the permittee shall include the date of the performance
test where that fuel was in use. (§63.10031(c)(3))

4) Include the date of the most recent tune-up for each unit subject to the requirement to conduct a performance tune-up according to §63.10021(e). Include the date of the most recent burner inspection if it was not done every 36 (or 48) months and was delayed until the next scheduled unit shutdown. (§63.10031(c)(4))

d. For each excess emissions occurring at an affected source where the permittee is using a CMS to comply with that emission limit or operating limit, the permittee shall include the information required in §63.10(e)(3)(v) in the compliance report specified in section (c). (§63.10031(d))

e. Each affected source that has obtained a Title V operating permit pursuant to part 70 or part 71 of this chapter shall report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to Table 8 to this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any emission limit, operating limit, or work practice requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. Submission of a compliance report does not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority. (§63.10031(e))

f. On or After April 16, 2017, and within 60 days after the date of completing each performance test, the permittee shall submit the results of the performance tests required by this subpart to EPA’s WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA’s Central Data Exchange (CDX) (www.epa.gov/cdx). Performance test data shall be submitted in the file format generated through use of EPA’s Electronic Reporting Tool (ERT) (see http://www.epa.gov/tnn/chief/ert/index.html). Only data collected using those test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) shall submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA. The electronic media shall be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted shall be submitted to EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, the permittee shall also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority. (§63.10031(f))

1) Within 60 days after the date of completing each CEMS (SO₂, PM, HCl, HF, and Hg) performance evaluation test, as defined in §63.2 and required by this subpart, the permittee shall submit the relative accuracy test audit (RATA) data (or, for PM CEMS, RCA and RRA data) required by this subpart to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA’s Central Data Exchange (CDX) (www.epa.gov/cdx). The RATA data shall be submitted in the file format generated through use of EPA’s Electronic Reporting Tool (ERT) (http://www.epa.gov/tnn/chief/ert/index.html). Only RATA data compounds listed on the ERT Web site are subject to this requirement. Owners or operators who claim that some of the information being submitted for RATAs is confidential business information (CBI) shall submit a complete ERT file including information claimed to be CBI on a compact disk or
other commonly used electronic storage media (including, but not limited to, flash drives) by registered letter to EPA and the same ERT file with the CBI omitted to EPA via CDX as described earlier in this paragraph. The compact disk or other commonly used electronic storage media shall be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. At the discretion of the delegated authority, owners or operators shall also submit these RATAs to the delegated authority in the format specified by the delegated authority. Owners or operators shall submit calibration error testing, drift checks, and other information required in the performance evaluation as described in §63.2 and as required in this chapter. (§63.10031(f)(1))

2) For a PM CEMS, PM CPMS, or approved alternative monitoring using a HAP metals CEMS, within 60 days after the reporting periods ending on March 31st, June 30th, September 30th, and December 31st, the permittee shall submit quarterly reports to EPA’s WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA’s Central Data Exchange (CDX) (www.epa.gov/cdx). The permittee shall use the appropriate electronic reporting form in CEDRI or provide an alternate electronic file consistent with EPA’s reporting form output format. For each reporting period, the quarterly reports shall include all of the calculated 30-boiler operating day rolling average values derived from the CEMS and PM CPMS. (§63.10031(f)(2))

3) Reports for an SO2 CEMS, a Hg CEMS or sorbent trap monitoring system, an HCl or HF CEMS, and any supporting monitors for each of these systems (such as a diluent or moisture monitor) shall be submitted using the ECMPS Client Tool, as provided for in Appendices A and B to this subpart and §63.10021(f). (§63.10031(f)(3))

4) Submit the compliance reports required under paragraphs (c) and (d) of this section and the notification of compliance status required under §63.10030(e) to EPA’s WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA’s Central Data Exchange (CDX) (www.epa.gov/cdx). The permittee shall use the appropriate electronic reporting form in CEDRI or provide an alternate electronic file consistent with EPA’s reporting form output format. (§63.10031(f)(4))

5) All reports required by this subpart not subject to the requirements in paragraphs (f)(1) through (4) of this section shall be sent to the Administrator or the Department at the appropriate address listed in §63.13. If acceptable to both the Administrator or the Department and the owner or operator of a source, these reports may be submitted on electronic media. The Administrator or the Department retains the right to require submittal of reports subject to paragraphs (f)(1), (2), and (3) of this section in paper format. (§63.10031(f)(5))

g. If the permittee had a malfunction during the reporting period, the compliance report shall include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. (§63.10031(g))

h. The permittee shall submit the reports required under §63.10031 and, if applicable, the reports required under appendices A and B to this subpart. The electronic reports required by appendices A and B to this subpart shall be sent to the Administrator or the Department electronically in a format prescribed by the Administrator or the Department, as provided in §63.10031. CEMS data (except for PM CEMS and any approved alternative monitoring using a HAP metals CEMS) shall be submitted using EPA’s Emissions Collection and Monitoring Plan System (ECMPS) Client Tool. Other data, including PM CEMS data, HAP metals CEMS data, and CEMS performance test detail reports, shall be submitted in the file format generated through use of EPA’s Electronic Reporting Tool, the Compliance and Emissions Data Reporting Interface, or alternate electronic
file format, all as provided for under §63.10031. (§63.10021(f))

i. The permittee shall report each instance in which the permittee did not meet an applicable emissions limit or operating limit in Tables 1 through 4 to this subpart or failed to conduct a required tune-up. These instances are deviations from the requirements of this subpart. These deviations shall be reported according to §63.10031. (§63.10021(g))

j. When the permittee is required to conduct an initial compliance demonstration as specified in §63.10011(a), the permittee shall submit a Notification of Compliance Status according to §63.9(h)(2)(ii). The Notification of Compliance Status report shall contain all the information specified in paragraphs (e)(1) through (7), as applicable. (§63.10030(e))

1) 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 the permittee 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. (§63.10030(e)(1))

2) Summary of the results of all performance tests and fuel analyses and calculations conducted to demonstrate initial compliance including all established operating limits. (§63.10030(e)(2))

3) Identification of whether the permittee plans to demonstrate compliance with each applicable emission limit through performance testing; fuel moisture analyses; performance testing with operating limits (e.g., use of PM CPMS; CEMS; or a sorbent trap monitoring system. (§63.10030(e)(3))

4) Identification of whether the permittee plans to demonstrate compliance by emissions averaging. (§63.10030(e)(4))

5) A signed certification that the permittee has met all applicable emission limits and work practice standards. (§63.10030(e)(5))

6) If the permittee had a deviation from any emission limit, work practice standard, or operating limit, the permittee shall also submit a brief description of the deviation, the duration of the deviation, emissions point identification, and the cause of the deviation in the Notification of Compliance Status report. (§63.10030(e)(6))

7) In addition to the information required in §63.9(h)(2), the permittee’s notification of compliance status shall include the following: (§63.10030(e)(7))

a) 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 permittee is conducting stack tests once every 3 years consistent with §63.10006(b), the date of the last three stack tests, a comparison of the emission level the permittee achieved in the last three stack tests to the 50 percent emission limit threshold required in §63.10006(i), and a statement as to whether there have been any operational changes since the last stack test that could increase emissions.

b) Certifications of compliance, as applicable, and shall be signed by a responsible official stating:

i) “This EGU complies with the requirements in §63.10021(a) to demonstrate continuous compliance.” and

ii) “No secondary materials that are solid waste were combusted in any affected unit.”

6. Work Practice Standards
The permittee shall meet each of the following work practice standards: (§63.9991(a)(1), Table 3 to 40 CFR Part 63 Subpart UUUU, §63.10011(g), (§63.10005(e))

1) Conduct a tune-up of the EGU burner and combustion controls at least each 36 calendar months, or each 48 calendar months if neural network combustion optimization software is employed, as specified in §63.10021(e).

2) During startup, the permittee shall operate all CMS during startup. Startup means either the first-ever firing of fuel in a boiler for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on-site use). For startup of a unit, the permittee shall use clean fuels, either natural gas or distillate oil or a combination of clean fuels for ignition. Once the permittee converts to firing coal or syngas, the permittee shall engage all of the applicable control technologies except the SCR. The permittee shall start the SCR system, appropriately to comply with relevant standards applicable during normal operation. The permittee shall comply with all applicable emissions limits at all times except for periods that meet the definitions of startup and shutdown in 40 CFR Part 63 Subpart UUUU.. The permittee shall keep records during periods of startup. The permittee shall provide reports concerning activities and periods of startup, as specified in §63.10011(g) and §63.10021(h) and (i).

3) During shutdown, the permittee shall operate all CMS during shutdown. Shutdown means the cessation of operation of a boiler for any purpose. Shutdown begins either when none of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on-site use) or at the point of no fuel being fired in the boiler. Shutdown ends when there is both no electricity being generated and no fuel being fired in the boiler. During shutdown, the permittee shall operate all applicable control technologies while firing coal, residual oil, or solid oil-derived fuel. The permittee shall comply with all applicable emissions limits at all times except for periods that meet the definitions of startup and shutdown in this subpart. The permittee shall keep records during periods of startup. The permittee shall provide reports concerning activities and periods of startup, as specified in §63.10011(g) and §63.10021(h) and (i).

b. All air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of operations that cause the permittee’s EGU to meet the definition of an EGU subject to this subpart shall be installed and operational as of the date the permittee’s source ceases to be or becomes subject to this subpart. (§63.10000(j))

c. For existing affected sources a tune-up may occur prior to April 16, 2012, so that existing sources without neural networks have up to 42 calendar months (3 years from promulgation plus 180 days) or, in the case of units employing neural network combustion controls, up to 54 calendar months (48 months from promulgation plus 180 days) after the date that is specified for the permittee’s source in §63.9984 and according to the applicable provisions in §63.7(a)(2) as cited in Table 9 to this subpart to demonstrate compliance with this requirement. If a tune-up occurs prior to such date, the source shall maintain adequate records to show that the tune-up met the requirements of this standard. (§63.10005(f))

d. If the permittee shall conduct periodic performance tune-ups of the permittee’s EGU(s), as specified in paragraphs (e)(1) through (9) of this section, perform the first tune-up as part of the permittee’s initial compliance demonstration. Notwithstanding this requirement, the permittee may delay the first burner inspection until the next scheduled unit outage provided the permittee meets...
the requirements of §63.10005. Subsequently, the permittee shall perform an inspection of the burner at least once every 36 calendar months unless the permittee’s EGU employs neural network combustion optimization during normal operations in which case the permittee shall perform an inspection of the burner and combustion controls at least once every 48 calendar months. (§63.10021(e))

1) As applicable, inspect the burner and combustion controls, and clean or replace any components of the burner or combustion controls as necessary upon initiation of the work practice program and at least once every required inspection period. Repair of a burner or combustion control component requiring special order parts may be scheduled as follows: (§63.10021(e)(1))

a) Burner or combustion control component parts needing replacement that affect the ability to optimize NOX and CO shall be installed within 3 calendar months after the burner inspection.

b) Burner or combustion control component parts that do not affect the ability to optimize NOX and CO may be installed on a schedule determined by the operator;

2) As applicable, inspect the flame pattern and make any adjustments to the burner or combustion controls necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer’s specifications, if available, or in accordance with best combustion engineering practice for that burner type; (§63.10021(e)(2))

3) As applicable, observe the damper operations as a function of mill and/or cyclone loadings, cyclone and pulverizer coal feeder loadings, or other pulverizer and coal mill performance parameters, making adjustments and effecting repair to dampers, controls, mills, pulverizers, cyclones, and sensors; (§63.10021(e)(3))

4) As applicable, evaluate windbox pressures and air proportions, making adjustments and effecting repair to dampers, actuators, controls, and sensors; (§63.10021(e)(4))

5) Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly. Such inspection may include calibrating excess O2 probes and/or sensors, adjusting overfire air systems, changing software parameters, and calibrating associated actuators and dampers to ensure that the systems are operated as designed. Any component out of calibration, in or near failure, or in a state that is likely to negate combustion optimization efforts prior to the next tune-up, should be corrected or repaired as necessary; (§63.10021(e)(5))

6) Optimize combustion to minimize generation of CO and NOX. This optimization should be consistent with the manufacturer’s specifications, if available, or best combustion engineering practice for the applicable burner type. NOX optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, adjusting combustion zone temperature profiles, and add-on controls such as SCR and SNCR; CO optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, and adjusting combustion zone temperature profiles; (§63.10021(e)(6))

7) While operating at full load or the predominantly operated load, measure the concentration in the effluent stream of CO and NOX ppm, by volume, and oxygen in volume percent, before and after the tune-up adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). The permittee may use portable CO, NOX and O2 monitors for this measurement. EGU’s employing neural network optimization systems need only provide a single pre- and post-tune-up value rather than continual values before and after each optimization adjustment made by the system; (§63.10021(e)(7))
8) Maintain on-site and submit, if requested by the Administrator or the Department, an annual report containing the information in paragraphs (e)(1) through (e)(9) of this section including: (§63.10021(e)(8))
   a) The concentrations of CO and NOx in the effluent stream in ppm by volume, and oxygen in volume percent, measured before and after an adjustment of the EGU combustion systems;
   b) A description of any corrective actions taken as a part of the combustion adjustment; and
   c) The type(s) and amount(s) of fuel used over the 12 calendar months prior to an adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period; and
9) Report the dates of the initial and subsequent tune-ups as follows: (§63.10021(e)(9))
   a) If the first required tune-up is performed as part of the initial compliance demonstration, report the date of the tune-up in hard copy (as specified in §63.10030) and electronically (as specified in §63.10031). Report the date of each subsequent tune-up electronically (as specified in §63.10031).
   b) If the first tune-up is not conducted as part of the initial compliance demonstration, but is postponed until the next unit outage, report the date of that tune-up and all subsequent tune-ups electronically, in accordance with §63.10031.
   e. If the permittee is required to meet an applicable tune-up work practice standard, the permittee shall conduct a performance tune-up according to §63.10021(e). (§63.10006(i))

1) For EGU’s not employing neural network combustion optimization during normal operation, each performance tune-up specified in §63.10021(e) shall be no more than 36 calendar months after the previous performance tune-up. (§63.10006(i)(1))
2) For EGU’s employing neural network combustion optimization systems during normal operation, each performance tune-up specified in §63.10021(e) shall be no more than 48 calendar months after the previous performance tune-up. (§63.10006(i)(2))

7. **Hg Monitoring Provisions**

   a. **General Provisions**

1) **Applicability.** The Hg CEMS or sorbent trap monitoring system shall be capable of measuring the total vapor phase mercury in units of the applicable emissions standard (e.g., lb/TBtu or lb/GWh), regardless of speciation. (40 CFR Part 63 Subpart UUUUU Appendix A 1.1)
2) **Initial Certification and Recertification Procedures.** The owner or operator of an affected unit that uses a Hg CEMS or a sorbent trap monitoring system together with other necessary monitoring components to account for Hg emissions in units of the applicable emissions standard shall comply with the initial certification and recertification procedures in section 4 of this appendix. (40 CFR Part 63 Subpart UUUUU Appendix A 1.2)
3) **Quality Assurance and Quality Control Requirements.** The owner or operator of an affected unit that uses a Hg CEMS or a sorbent trap monitoring system together with other necessary monitoring components to account for Hg emissions in units of the applicable emissions standard shall meet the applicable quality assurance requirements in section 5 of this appendix. (40 CFR Part 63 Subpart UUUUU Appendix A 1.3)
4) **Missing Data Procedures.** The owner or operator of an affected unit is not required to substitute for missing data from Hg CEMS or sorbent trap monitoring systems. Any process operating hour for which quality-assured Hg concentration data are not obtained is counted as an hour of
monitoring system downtime. (40 CFR Part 63 Subpart UUUUU Appendix A 1.4)

5) **Preventive Maintenance.** Keep a written record of procedures needed to maintain the Hg CEMS and/or sorbent trap monitoring system(s) in proper operating condition and a schedule for those procedures. Include, at a minimum, all procedures specified by the manufacturers of the equipment and, if applicable, additional or alternate procedures developed for the equipment. (40 CFR Part 63 Subpart UUUUU Appendix A 5.4.1.1)

6) **Recordkeeping and Reporting.** Keep a written record describing procedures that shall be used to implement the recordkeeping and reporting requirements of this appendix. (40 CFR Part 63 Subpart UUUUU Appendix A 5.4.1.2)

7) **Maintenance Records.** Keep a record of all testing, maintenance, or repair activities performed on any Hg CEMS or sorbent trap monitoring system in a location and format suitable for inspection. A maintenance log may be used for this purpose. The following records should be maintained: date, time, and description of any testing, adjustment, repair, replacement, or preventive maintenance action performed on any monitoring system and records of any corrective actions associated with a monitor outage period. Additionally, any adjustment that may significantly affect a system's ability to accurately measure emissions data shall be recorded (e.g., changing the dilution ratio of a CEMS), and a written explanation of the procedures used to make the adjustment(s) shall be kept. (40 CFR Part 63 Subpart UUUUU Appendix A 5.4.1.3)

b. **Monitoring of Hg Emissions**

1) **Monitoring System Installation Requirements.** Flue gases from the affected units under this subpart vent to the atmosphere through a variety of exhaust configurations including single stacks, common stack configurations, and multiple stack configurations. For each of these configurations, §63.10010(a) specifies the appropriate location(s) at which to install continuous monitoring systems (CMS). These CMS installation provisions apply to the Hg CEMS, sorbent trap monitoring systems, and other continuous monitoring systems that provide data for the Hg emissions calculations in section 6.2 of this appendix. (40 CFR Part 63 Subpart UUUUU Appendix A 2.1)

2) **Primary and Backup Monitoring Systems.** In the electronic monitoring plan described in section 7.1.1.2.1 of this appendix, the permittee must designate a primary Hg CEMS or sorbent trap monitoring system. The primary system must be used to report hourly Hg concentration values when the system is able to provide quality-assured data, i.e., when the system is “in control”. However, to increase data availability in the event of a primary monitoring system outage, the permittee may install, operate, maintain, and calibrate backup monitoring systems, as follows: (40 CFR Part 63 Subpart UUUUU Appendix A 2.2)

a) **Redundant Backup Systems.** A redundant backup monitoring system may be either a separate Hg CEMS with its own probe, sample interface, and analyzer, or a separate sorbent trap monitoring system. A redundant backup system is one that is permanently installed at the unit or stack location, and is kept on “hot standby” in case the primary monitoring system is unable to provide quality-assured data. A redundant backup system must be represented as a unique monitoring system in the electronic monitoring plan. Each redundant backup monitoring system must be certified according to the applicable provisions in section 4 of this appendix and must meet the applicable on-going QA requirements in section 5 of this appendix. (40 CFR Part 63 Subpart UUUUU Appendix A 2.2.1)

b) **Non-redundant Backup Monitoring Systems.** A non-redundant backup monitoring system is a separate Hg CEMS or sorbent trap system that has been certified at a particular unit or stack location, but is not permanently installed at that location. Rather, the system is kept
on “cold standby” and may be reinstalled in the event of a primary monitoring system outage. A non-redundant backup monitoring system must be represented as a unique monitoring system in the electronic monitoring plan. Non-redundant backup Hg CEMS must complete the same certification tests as the primary monitoring system, with one exception. The 7-day calibration error test is not required for a non-redundant backup Hg CEMS. Except as otherwise provided in section 2.2.4.5 of this appendix, a non-redundant backup monitoring system may only be used for 720 hours per year at a particular unit or stack location. (40 CFR Part 63 Subpart UUUU Appendix A 2.2.2)

c) *Temporary Like-kind Replacement Analyzers.* When a primary Hg analyzer needs repair or maintenance, the permittee may temporarily install a like-kind replacement analyzer, to minimize data loss. Except as otherwise provided in section 2.2.4.5 of this appendix, a temporary like-kind replacement analyzer may only be used for 720 hours per year at a particular unit or stack location. The analyzer must be represented as a component of the primary Hg CEMS, and must be assigned a 3-character component ID number, beginning with the prefix “LK”. (40 CFR Part 63 Subpart UUUU Appendix A 2.2.3)

d) *Quality Assurance Requirements for Non-redundant Backup Monitoring Systems and Temporary Like-kind Replacement Analyzers.* To quality-assure the data from non-redundant backup Hg monitoring systems and temporary like-kind replacement Hg analyzers, the following provisions apply: (40 CFR Part 63 Subpart UUUU Appendix A 2.2.4)

i) When a certified non-redundant backup sorbent trap monitoring system is brought into service, the permittee must follow the procedures for routine day-to-day operation of the system, in accordance with Performance Specification (PS) 12B in appendix B to part 60 of this chapter. (40 CFR Part 63 Subpart UUUU Appendix A 2.2.4.1)

ii) When a certified non-redundant backup Hg CEMS or a temporary like-kind replacement Hg analyzer is brought into service, a calibration error test and a linearity check must be performed and passed. A single point system integrity check is also required, unless a NIST-traceable source of oxidized Hg was used for the calibration error test. (40 CFR Part 63 Subpart UUUU Appendix A 2.2.4.2)

iii) Each non-redundant backup Hg CEMS or temporary like-kind replacement Hg analyzer shall comply with all required daily, weekly, and quarterly quality-assurance test requirements in section 5 of this appendix, for as long as the system or analyzer remains in service. (40 CFR Part 63 Subpart UUUU Appendix A 2.2.4.3)

iv) For the routine, on-going quality-assurance of a non-redundant backup Hg monitoring system, a relative accuracy test audit (RATA) must be performed and passed at least once every 8 calendar quarters at the unit or stack location(s) where the system will be used. (40 CFR Part 63 Subpart UUUU Appendix A 2.2.4.4)

v) To use a non-redundant backup Hg monitoring system or a temporary like-kind replacement analyzer for more than 720 hours per year at a particular unit or stack location, a RATA must first be performed and passed at that location. (40 CFR Part 63 Subpart UUUU Appendix A 2.2.4.5)

c. *Continuous Monitoring Methods.* The Hg CEMS shall meet the performance specifications in 40 CFR Part 63 Subpart UUUU Appendix A Section 4.1.1. The methods used shall conform to the standards and procedures in 40 CFR Part 63 Subpart UUUU Appendix A Section 3.2. (40 CFR Part 63 Subpart UUUU Appendix A 3.2)

d. Certification and Recertification Requirements

1) *Certification Requirements.* All Hg CEMS and sorbent trap monitoring systems and the
additional monitoring systems used to continuously measure Hg emissions in units of the applicable emissions standard in accordance with this appendix must be certified in a timely manner, such that the initial compliance demonstration is completed no later than the applicable date in §63.10005(g). (40 CFR Part 63 Subpart UUUUU Appendix A 4.1)

a) **Hg CEMS.** Table A–1, below, summarizes the certification test requirements and performance specifications for a Hg CEMS. The CEMS may not be used to report quality-assured data until these performance criteria are met. Paragraphs 4.1.1.1 through 4.1.1.5 of this section provide specific instructions for the required tests. All tests must be performed with the affected unit(s) operating (i.e., combusting fuel). Except for the RATA, which must be performed at normal load, no particular load level is required for the certification tests. (40 CFR Part 63 Subpart UUUUU Appendix A 4.1.1)

i) **7-Day Calibration Error Test.** Perform the 7-day calibration error test on 7 consecutive source operating days, using a zero-level gas and either a high-level or a mid-level calibration gas standard (as defined in sections 3.1.8, 3.1.10, and 3.1.11 of this appendix). Either elemental or oxidized NIST-traceable Hg standards (as defined in sections 3.1.4 and 3.1.5 of this appendix) may be used for the test. If moisture and/or chlorine is added to the calibration gas, the dilution effect of the moisture and/or chlorine addition on the calibration gas concentration must be accounted for in an appropriate manner. Operate the Hg CEMS in its normal sampling mode during the test. The calibrations should be approximately 24 hours apart, unless the 7-day test is performed over nonconsecutive calendar days. On each day of the test, inject the zero-level and upscale gases in sequence and record the analyzer responses. Pass the calibration gas through all filters, scrubbers, conditioners, and other monitor components used during normal sampling, and through as much of the sampling probe as is practical. Do not make any manual adjustments to the monitor (i.e., resetting the calibration) until after taking measurements at both the zero and upscale concentration levels. If automatic adjustments are made following both injections, conduct the calibration error test such that the magnitude of the adjustments can be determined, and use only the unadjusted analyzer responses in the calculations. Calculate the calibration error (CE) on each day of the test, as described in Table A–1. The CE on each day of the test must either meet the main performance specification or the alternative specification in Table A–1. (40 CFR Part 63 Subpart UUUUU Appendix A 4.1.1.1)

ii) **Linearity Check.** Perform the linearity check using low, mid, and high-level concentrations of NIST-traceable elemental Hg standards. Three gas injections at each concentration level are required, with no two successive injections at the same concentration level. Introduce the calibration gas at the gas injection port, as specified in section 3.2.1.1.3.6 of this appendix. Operate the CEMS at its normal operating temperature and conditions. Pass the calibration gas through all filters, scrubbers, conditioners, and other components used during normal sampling, and through as much of the sampling probe as is practical. If moisture and/or chlorine is added to the calibration gas, the dilution effect of the moisture and/or chlorine addition on the calibration gas concentration must be accounted for in an appropriate manner. Record the monitor response from the data acquisition and handling system for each gas injection. At each concentration level, use the average analyzer response to calculate the linearity error (LE), as described in Table A–1. The LE must either meet the main performance specification or the alternative specification in Table A–1. (40 CFR Part 63 Subpart UUUUU Appendix A 4.1.1.2)

iii) **Three-Level System Integrity Check.** Perform the 3-level system integrity check using low, mid, and high-level calibration gas concentrations generated by a NIST-traceable
source of oxidized Hg. Follow the same basic procedure as for the linearity check. If moisture and/or chlorine is added to the calibration gas, the dilution effect of the moisture and/or chlorine addition on the calibration gas concentration must be accounted for in an appropriate manner. Calculate the system integrity error (SIE), as described in Table A–1. The SIE must either meet the main performance specification or the alternative specification in Table A–1. (Note: This test is not required if the CEMS does not have a converter). (40 CFR Part 63 Subpart UUUUUU Appendix A 4.1.1.3)

Table A–1—Required Certification Tests and Performance Specifications for Hg CEMS

<table>
<thead>
<tr>
<th>For this required certification test</th>
<th>The main performance specification is...</th>
<th>The alternate performance specification is...</th>
<th>And the conditions of the alternate specification are...</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-day calibration error test²</td>
<td>R – A; ≤5.0% of span value, for both the zero and upscale gases, on each of the 7 days</td>
<td>R – A; ≤1.0 μg/scm</td>
<td>The alternate specification may be used on any day of the test.</td>
</tr>
<tr>
<td>Linearity check³</td>
<td>R – A_avg; ≤10.0% of the reference gas concentration at each calibration gas level (low, mid, or high)</td>
<td>R – A_avg; ≤0.8 μg/scm</td>
<td>The alternate specification may be used at any gas level.</td>
</tr>
<tr>
<td>3-level system integrity check⁴</td>
<td>R – A_avg; ≤10.0% of the reference gas concentration at each calibration gas level</td>
<td>R – A_avg; ≤0.8 μg/scm</td>
<td>The alternate specification may be used at any gas level.</td>
</tr>
<tr>
<td>RATA</td>
<td>20.0% RA</td>
<td>RM_avg – C_avg; ≤1.0 μg/scm**</td>
<td>RM_avg &lt; 5.0 μg/scm.</td>
</tr>
<tr>
<td>Cycle time test²</td>
<td>15 minutes.⁵</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹Note that R – A; is the absolute value of the difference between the reference gas value and the analyzer reading. R – A_avg; is the absolute value of the difference between the reference gas concentration and the average of the analyzer responses, at a particular gas level.

²Use either elemental or oxidized Hg standards; a mid-level or high-level upscale gas may be used. This test is not required for Hg CEMS that use integrated batch sampling; however, those monitors must be capable of recording at least one Hg concentration reading every 15 minutes.

³Use elemental Hg standards.

⁴Use oxidized Hg standards. Not required if the CEMS does not have a converter.

⁵Stability criteria—Readings change by <2.0% of span or by ≤0.5 μg/scm, for 2 minutes.

** Note that RM_avg – C_avg; is the absolute difference between the mean reference method value and the mean CEMS value from the RATA. The arithmetic difference between RM_avg and C_avg can be either + or –.

iv) Cycle Time Test. Perform the cycle time test, using a zero-level gas and a high-level calibration gas. Either an elemental or oxidized NIST-traceable Hg standard may be used as the high-level gas. Perform the test in two stages—upscale and downside. The slower of the upscale and downside response times is the cycle time for the CEMS. Begin each stage of the test by injecting calibration gas after achieving a stable reading of the stack emissions. The cycle time is the amount of time it takes for the analyzer to
register a reading that is 95 percent of the way between the stable stack emissions reading and the final, stable reading of the calibration gas concentration. Use the following criterion to determine when a stable reading of stack emissions or calibration gas has been attained—the reading is stable if it changes by no more than 2.0 percent of the span value or 0.5 μg/scm (whichever is less restrictive) for two minutes, or a reading with a change of less than 6.0 percent from the measured average concentration over 6 minutes. Integrated batch sampling type Hg CEMS are exempted from this test; however, these systems must be capable of delivering a measured Hg concentration reading at least once every 15 minutes. If necessary to increase measurement sensitivity of a batch sampling type Hg CEMS for a specific application, the permittee may petition the Administrator for approval of a time longer than 15 minutes between readings. (40 CFR Part 63 Subpart UUUUU Appendix A 4.1.1.4)

v) **Relative Accuracy Test Audit (RATA).** Perform the RATA of the Hg CEMS at normal load. Acceptable Hg reference methods for the RATA include ASTM D6784-02 (Reapproved 2008), “Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method)” (incorporated by reference, see §63.14) and Methods 29, 30A, and 30B in appendix A–8 to part 60. When Method 29 or ASTM D6784–02 is used, paired sampling trains are required. To validate a Method 29 or ASTM D6784–02 test run, calculate the relative deviation (RD) using Equation A–1 of this section, and assess the results as follows to validate the run. The RD must not exceed 10 percent, when the average Hg concentration is greater than 1.0 μg/dscm. If the average concentration is ≤ 1.0 μg/dscm, the RD must not exceed 20 percent. The RD results are also acceptable if the absolute difference between the two Hg concentrations does not exceed 0.2 μg/dscm. If the RD specification is met, the results of the two samples shall be averaged arithmetically. (40 CFR Part 63 Subpart UUUUU Appendix A 4.1.1.5)

\[
RD = \left| \frac{C_a - C_b}{C_a + C_b} \right| \times 100 \quad \text{(Eq. A–1)}
\]

Where:

RD = Relative deviation between the Hg concentrations of samples “a” and “b” (percent)

\(C_a\) = Hg concentration of Hg sample “a” (μg/dscm)

\(C_b\) = Hg concentration of Hg sample “b” (μg/dscm)

(1) **Special Considerations.** A minimum of nine valid test runs must be performed, directly comparing the CEMS measurements to the reference method. More than nine test runs may be performed. If this option is chosen, the results from a maximum of three test runs may be rejected so long as the total number of test results used to determine the relative accuracy is greater than or equal to nine; however, all data must be reported including the rejected data. The minimum time per run is 21 minutes if Method 30A is used. If Method 29, Method 30B, or ASTM D6784–02 (Reapproved 2008), “Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method)” (incorporated by reference, see §63.14) is used, the time per run must be long enough to collect a sufficient mass of Hg to analyze. Complete the RATA within 168 unit operating hours, except when Method 29 or ASTM D6784–02 is used, in which case up to 336 operating
hours may be taken to finish the test. (40 CFR Part 63 Subpart UUUUUU Appendix A 4.1.1.5.1)

(2) **Calculation of RATA Results.** Calculate the relative accuracy (RA) of the monitoring system, on a µg/scm basis, as described in section 12 of Performance Specification (PS) 2 in Appendix B to part 60 of this chapter (see Equations 2–3 through 2–6 of PS2). For purposes of calculating the relative accuracy, ensure that the reference method and monitoring system data are on a consistent moisture basis, either wet or dry. The CEMS must either meet the main performance specification or the alternative specification in Table A–1. (40 CFR Part 63 Subpart UUUUUU Appendix A 4.1.1.5.2)

(3) **Bias Adjustment.** Measurement or adjustment of Hg CEMS data for bias is not required. (40 CFR Part 63 Subpart UUUUUU Appendix A 4.1.1.5.3)

b) **Sorbent Trap Monitoring Systems.** For the initial certification of a sorbent trap monitoring system, only a RATA is required. (40 CFR Part 63 Subpart UUUUUU Appendix A 4.1.2)

i) **Reference Methods.** The acceptable reference methods for the RATA of a sorbent trap monitoring system are the same as those listed in paragraph 4.1.1.5 of this section. (40 CFR Part 63 Subpart UUUUUU Appendix A 4.1.2.1)

ii) “The special considerations specified in paragraph 4.1.1.5.1 of this section apply to the RATA of a sorbent trap monitoring system. During the RATA, the monitoring system must be operated and quality-assured in accordance with Performance Specification (PS) 12B in Appendix B to part 60 of this chapter with the following exceptions for sorbent trap section 2 breakthrough: (40 CFR Part 63 Subpart UUUUUU Appendix A 4.1.2.2)

1. For stack Hg concentrations >1 µg/dscm, ≤10% of section 1 Hg mass;
2. For stack Hg concentrations ≤1 µg/dscm and >0.5 µg/dscm, ≤20% of section 1 Hg mass;
3. For stack Hg concentrations ≤0.5 µg/dscm and >0.1 µg/dscm, ≤50% of section 1 Hg mass; and
4. For stack Hg concentrations ≤0.1 µg/dscm, no breakthrough criterion assuming all other QA/QC specifications are met.

iii) The type of sorbent material used by the traps during the RATA must be the same as for daily operation of the monitoring system; however, the size of the traps used for the RATA may be smaller than the traps used for daily operation of the system. (40 CFR Part 63 Subpart UUUUUU Appendix A 4.1.2.3)

iv) **Calculation of RATA Results.** Calculate the relative accuracy (RA) of the sorbent trap monitoring system, on a µg/scm basis, as described in section 12 of Performance Specification (PS) 2 in appendix B to part 60 of this chapter (see Equations 2–3 through 2–6 of PS2). For purposes of calculating the relative accuracy, ensure that the reference method and monitoring system data are on a consistent moisture basis, either wet or dry. The main and alternative RATA performance specifications in Table A–1 for Hg CEMS also apply to the sorbent trap monitoring system. (40 CFR Part 63 Subpart UUUUUU Appendix A 4.1.2.4)

v) **Bias Adjustment.** Measurement or adjustment of sorbent trap monitoring system data for bias is not required. (40 CFR Part 63 Subpart UUUUUU Appendix A 4.1.2.5)

c) **Diluent Gas, Flow Rate, and/or Moisture Monitoring Systems.** Monitoring systems that are used to measure stack gas volumetric flow rate, diluent gas concentration, or stack gas moisture content, either for routine operation of a sorbent trap monitoring system or to convert Hg concentration data to units of the applicable emission limit, must be certified in accordance with the applicable provisions of part 75 of this chapter. (40 CFR Part 63 Subpart UUUUUU Appendix A 4.1.3)
2) **Recertification.** Whenever the owner or operator makes a replacement, modification, or change to a certified CEMS or sorbent trap monitoring system that may significantly affect the ability of the system to accurately measure or record pollutant or diluent gas concentrations, stack gas flow rates, or stack gas moisture content, the owner or operator shall recertify the monitoring system. Furthermore, whenever the owner or operator makes a replacement, modification, or change to the flue gas handling system or the unit operation that may significantly change the concentration or flow profile, the owner or operator shall recertify the monitoring system. The same tests performed for the initial certification of the monitoring system shall be repeated for recertification, unless otherwise specified by the Administrator. Examples of changes that require recertification include: replacement of a gas analyzer; complete monitoring system replacement, and changing the location or orientation of the sampling probe. (40 CFR Part 63 Subpart UUUUU Appendix A 4.2)

e. 5. Ongoing Quality Assurance (QA) and Data Validation

1) **Hg CEMS.**

   a) **Required QA Tests.** Periodic QA testing of each Hg CEMS is required following initial certification. The required QA tests, the test frequencies, and the performance specifications that must be met are summarized in Table A–2, below. All tests must be performed with the affected unit(s) operating (i.e., combusting fuel). Except for the RATA, which must be performed at normal load, no particular load level is required for the tests. For each test, follow the same basic procedures in section 4.1.1 of this appendix that were used for initial certification. (40 CFR Part 63 Subpart UUUUU Appendix A 5.1.1)

   b) **Test Frequency.** The frequency for the required QA tests of the Hg CEMS shall be as follows: (40 CFR Part 63 Subpart UUUUU Appendix A 5.1.2)

      i) Calibration error tests of the Hg CEMS are required daily, except during unit outages. Use either NIST-traceable elemental Hg standards or NIST-traceable oxidized Hg standards for these calibrations. Both a zero-level gas and either a mid-level or high-level gas are required for these calibrations. (40 CFR Part 63 Subpart UUUUU Appendix A 5.1.2.1)

      ii) Perform a linearity check of the Hg CEMS in each QA operating quarter, using low-level, mid-level, and high-level NIST-traceable elemental Hg standards. For units that operate infrequently, limited exemptions from this test are allowed for “non-QA operating quarters”. A maximum of three consecutive exemptions for this reason are permitted, following the quarter of the last test. After the third consecutive exemption, a linearity check must be performed in the next calendar quarter or within a grace period of 168 unit or stack operating hours after the end of that quarter. The test frequency for 3-level system integrity checks (if performed in lieu of linearity checks) is the same as for the linearity checks. Use low-level, mid-level, and high-level NIST-traceable oxidized Hg standards for the system integrity checks. (40 CFR Part 63 Subpart UUUUU Appendix A 5.1.2.2)

      iii) If required, perform a single-level system integrity check weekly, i.e., once every 7 operating days (see the third column in Table A–2). (40 CFR Part 63 Subpart UUUUU Appendix A 5.1.2.3)

      iv) The test frequency for the RATAs of the Hg CEMS shall be annual, i.e., once every four QA operating quarters. For units that operate infrequently, extensions of RATA deadlines are allowed for non-QA operating quarters. Following a RATA, if there is a subsequent non-QA quarter, it extends the deadline for the next test by one calendar quarter. However, there is a limit to these extensions; the deadline may not be extended beyond the end of the eighth calendar quarter after the quarter of the last test. At that
point, a RATA must either be performed within the eighth calendar quarter or in a 720 hour unit or stack operating hour grace period following that quarter. When a required annual RATA is done within a grace period, the deadline for the next RATA is three QA operating quarters after the quarter in which the grace period test is performed. (40 CFR Part 63 Subpart UUUUU Appendix A 5.1.2.4)

c) **Grace Periods.**

i) A 168 unit or stack operating hour grace period is available for quarterly linearity checks and 3-level system integrity checks of the Hg CEMS. (40 CFR Part 63 Subpart UUUU Appendix A 5.1.3.1)

ii) A 720 unit or stack operating hour grace period is available for RATAs of the Hg CEMS. (40 CFR Part 63 Subpart UUUU Appendix A 5.1.3.2)

iii) There is no grace period for weekly system integrity checks. The test must be completed once every 7 operating days. (40 CFR Part 63 Subpart UUUU Appendix A 5.1.3.3)

d) **Data Validation.** The Hg CEMS is considered to be out-of-control, and data from the CEMS may not be reported as quality-assured, when any one of the acceptance criteria for the required QA tests in Table A–2 is not met. The CEMS is also considered to be out-of-control when a required QA test is not performed on schedule or within an allotted grace period. To end an out-of-control period, the QA test that was either failed or not done on time must be performed and passed. Out-of-control periods are counted as hours of monitoring system downtime. (40 CFR Part 63 Subpart UUUU Appendix A 5.1.4)

e) **Conditional Data Validation.** For certification, recertification, and diagnostic testing of Hg monitoring systems, and for the required QA tests when non-redundant backup Hg monitoring systems or temporary like-kind Hg analyzers are brought into service, the conditional data validation provisions in §§75.20(b)(3)(ii) through (b)(3)(ix) of this chapter may be used to avoid or minimize data loss. The allotted window of time to complete 7-day calibration error tests, linearity checks, cycle time tests, and RATAs shall be as specified in §75.20(b)(3)(iv) of this chapter. Required system integrity checks must be completed within 168 unit or stack operating hours after the probationary calibration error test. (40 CFR Part 63 Subpart UUUU Appendix A 5.1.5)

**Table A–2—On-Going QA Test Requirements for Hg CEMS**

<table>
<thead>
<tr>
<th>Perform this type of QA test . . .</th>
<th>At this frequency . . .</th>
<th>With these qualifications and exceptions . . .</th>
<th>Acceptance criteria . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calibration error test</td>
<td>Daily</td>
<td>• Use either a mid- or high-level gas</td>
<td>R–A ≤ 5.0% of span value.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Use either elemental or oxidized Hg</td>
<td>or R–A ≤ 1.0 μg/scm.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Calibrations are not required when the unit is not in operation</td>
<td></td>
</tr>
<tr>
<td>Single-level system integrity check</td>
<td>Weekly¹</td>
<td>• Required only for systems with converters</td>
<td>R–Aavg ≤ 10.0% of the reference gas value.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Use oxidized Hg—either mid- or high-level</td>
<td>or R–Aavg ≤ 0.8 μg/scm.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Not required if daily calibrations are done with a NIST-traceable source of oxidized Hg</td>
<td></td>
</tr>
<tr>
<td>Linearity check</td>
<td>Quarterly³</td>
<td>• Required in each “QA operating quarter”—and no</td>
<td>R–Aavg ≤ 10.0% of the reference</td>
</tr>
<tr>
<td>or 3-level system integrity check</td>
<td>less than once every 4 calendar quarters</td>
<td>gas value, at each calibration gas level. or R – A_{avg} ≤ 0.8 \mu g/scm.</td>
<td></td>
</tr>
<tr>
<td>----------------------------------</td>
<td>------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>168 operating hour grace period available</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use elemental Hg for linearity check</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use oxidized Hg for system integrity check</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RATA</td>
<td>annual^4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test deadline may be extended for “non-QA operating quarters”, up to a maximum of 8 quarters from the quarter of the previous test</td>
<td>20.0% RA. or R_Mavg – C_{avg} ≤ 1.0 \mu g/scm, if R_Mavg &lt; 5.0 \mu g/scm.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>720 operating hour grace period available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1“Weekly” means once every 7 operating days.
2A “QA operating quarter” is a calendar quarter with at least 168 unit or stack operating hours.
3“Quarterly” means once every QA operating quarter.
4“Annual” means once every four QA operating quarters.

f) Adjustment of Span. If the permittee discovers that a span adjustment is needed (e.g., if the Hg concentration readings exceed the span value for a significant percentage of the unit operating hours in a calendar quarter), the permittee must implement the span adjustment within 90 days after the end of the calendar quarter in which the permittee identifies the need for the adjustment. A diagnostic linearity check is required within 168 unit or stack operating hours after changing the span value. (40 CFR Part 63 Subpart UUUU Appendix A 5.1.6)

g) Daily Calibrations, Linearity Checks and System Integrity Checks. Keep a written record of the procedures used for daily calibrations of the Hg CEMS. If moisture and/or chlorine is added to the Hg calibration gas, document how the dilution effect of the moisture and/or chlorine addition on the calibration gas concentration is accounted for in an appropriate manner. Also keep records of the procedures used to perform linearity checks of the Hg CEMS and the procedures for system integrity checks of the Hg CEMS. Document how the test results are calculated and evaluated. (40 CFR Part 63 Subpart UUUU Appendix A 5.4.2.1)

h) Monitoring System Adjustments. Document how each component of the Hg CEMS will be adjusted to provide correct responses to calibration gases after routine maintenance, repairs, or corrective actions. (40 CFR Part 63 Subpart UUUU Appendix A 5.4.2.2)

i) Relative Accuracy Test Audits. Keep a written record of procedures used for RATA’s of the Hg CEMS. Indicate the reference methods used and document how the test results are calculated and evaluated. (40 CFR Part 63 Subpart UUUU Appendix A 5.4.2.3)

2) Sorbent Trap Monitoring Systems.
   a) Each sorbent trap monitoring system shall be continuously operated and maintained in accordance with Performance Specification (PS) 12B in appendix B to part 60 of this
The QA/QC criteria for routine operation of the system are summarized in Table 12B–1 of PS 12B. Each pair of sorbent traps may be used to sample the stack gas for up to 14 operating days. (40 CFR Part 63 Subpart UUUU Appendix A 5.2.1)

b) For ongoing QA, periodic RATAs of the system are required. (40 CFR Part 63 Subpart UUUU Appendix A 5.2.2)

i) The RATA frequency shall be annual, i.e., once every four QA operating quarters. The provisions in section 5.1.2.4 of this appendix pertaining to RATA deadline extensions also apply to sorbent trap monitoring systems. (40 CFR Part 63 Subpart UUUU Appendix A 5.2.2.1)

ii) The same RATA performance criteria specified in Table A–4 for Hg CEMS shall apply to the annual RATAs of the sorbent trap monitoring system. (40 CFR Part 63 Subpart UUUU Appendix A 5.2.2.2)

iii) A 720 unit or stack operating hour grace period is available for RATAs of the monitoring system. (40 CFR Part 63 Subpart UUUU Appendix A 5.2.2.3)

c) Data validation for sorbent trap monitoring systems shall be done in accordance with Table 12B–1 in Performance Specification (PS) 12B in appendix B to part 60 of this chapter. All periods of invalid data shall be counted as hours of monitoring system downtime. (40 CFR Part 63 Subpart UUUU Appendix A 5.2.3)

3) **Flow Rate, Diluent Gas, and Moisture Monitoring Systems.** The on-going QA test requirements for these monitoring systems are specified in part 75 of this chapter (see §§63.10010(b) through (d)). (40 CFR Part 63 Subpart UUUU Appendix A 5.3)

4) **QA/QC Program Requirements.** The owner or operator shall develop and implement a quality assurance/quality control (QA/QC) program for the Hg CEMS and/or sorbent trap monitoring systems that are used to provide data under this subpart. At a minimum, the program shall include a written plan that describes in detail (or that refers to separate documents containing) complete, step-by-step procedures and operations for the most important QA/QC activities. Electronic storage of the QA/QC plan is permissible, provided that the information can be made available in hard copy to auditors and inspectors. The QA/QC program requirements for the diluent gas, flow rate, and moisture monitoring systems described in section 3.2.1.3 of this appendix are specified in section 1 of appendix B to part 75 of this chapter. (40 CFR Part 63 Subpart UUUU Appendix A 5.4)

a) **Sorbent Trap Identification and Tracking.** Include procedures for inscribing or otherwise permanently marking a unique identification number on each sorbent trap, for chain of custody purposes. Keep records of the ID of the monitoring system in which each sorbent trap is used, and the dates and hours of each Hg collection period. (40 CFR Part 63 Subpart UUUU Appendix A 5.4.3.1)

b) **Monitoring System Integrity and Data Quality.** Document the procedures used to perform the leak checks when a sorbent trap is placed in service and removed from service. Also document the other QA procedures used to ensure system integrity and data quality, including, but not limited to, gas flow meter calibrations, verification of moisture removal, and ensuring air-tight pump operation. In addition, the QA plan must include the data acceptance and quality control criteria in Table 12B–1 in section 9.0 of Performance Specification (PS) 12B in Appendix B to part 60 of this chapter. All reference meters used to calibrate the gas flow meters (e.g., wet test meters) shall be periodically recalibrated. Annual, or more frequent, recalibration is recommended. If a NIST-traceable calibration device is used as a reference flow meter, the QA plan must include a protocol for ongoing maintenance and periodic recalibration to maintain the accuracy and NIST-traceability of the calibrator. (40 CFR Part 63 Subpart UUUU Appendix A 5.4.3.2)

c) **Hg Analysis.** Explain the chain of custody employed in packing, transporting, and analyzing the sorbent traps. Keep records of all Hg analyses. The analyses shall be
performed in accordance with the procedures described in section 11.0 of Performance Specification (PS) 12B in Appendix B to part 60 of this chapter. (40 CFR Part 63 Subpart UUUU Appendix A 5.4.3.3)

d) Data Collection Period. State, and provide the rationale for, the minimum acceptable data collection period (e.g., one day, one week, etc.) for the size of sorbent trap selected for the monitoring. Address such factors as the Hg concentration in the stack gas, the capacity of the sorbent trap, and the minimum mass of Hg required for the analysis. Each pair of sorbent traps may be used to sample the stack gas for up to 14 operating days. (40 CFR Part 63 Subpart UUUU Appendix A 5.4.3.4)

e) Relative Accuracy Test Audit Procedures. Keep records of the procedures and details peculiar to the sorbent trap monitoring systems that are to be followed for relative accuracy test audits, such as sampling and analysis methods. (40 CFR Part 63 Subpart UUUU Appendix A 5.4.3.5)

f. Data Reduction and Calculations

1) Data Reduction. (40 CFR Part 63 Subpart UUUU Appendix A 6.1)
   a) Reduce the data from Hg CEMS to hourly averages, in accordance with §60.13(b)(2) of this chapter. (40 CFR Part 63 Subpart UUUU Appendix A 6.1.1)
   b) For sorbent trap monitoring systems, determine the Hg concentration for each data collection period and assign this concentration value to each operating hour in the data collection period. (40 CFR Part 63 Subpart UUUU Appendix A 6.1.2)
   c) For any operating hour in which valid data are not obtained, either for Hg concentration or for a parameter used in the emissions calculations (i.e., flow rate, diluent gas concentration, or moisture, as applicable), do not calculate the Hg emission rate for that hour. For the purposes of this appendix, part 75 substitute data values are not considered to be valid data. (40 CFR Part 63 Subpart UUUU Appendix A 6.1.3)
   d) Operating hours in which valid data are not obtained for Hg concentration are considered to be hours of monitor downtime. The use of substitute data for Hg concentration is not required. (40 CFR Part 63 Subpart UUUU Appendix A 6.1.4)

2) Calculation of Hg Emission Rates. Use the applicable calculation methods in paragraphs 6.2.1 and 6.2.2 of this section to convert Hg concentration values to the appropriate units of the emission standard. (40 CFR Part 63 Subpart UUUU Appendix A 6.2)
   a) Heat Input-Based Hg Emission Rates. Calculate hourly heat input-based Hg emission rates, in units of lb/TBtu, according to sections 6.2.1.1 through 6.2.1.4 of this appendix. (40 CFR Part 63 Subpart UUUU Appendix A 6.2.1)
      i) Select an appropriate emission rate equation from among Equations 19–1 through 19–9 in EPA Method 19 in appendix A–7 to part 60 of this chapter. (40 CFR Part 63 Subpart UUUU Appendix A 6.2.1.1)
      ii) Calculate the Hg emission rate in lb/MMBtu, using the equation selected from Method 19. Multiply the Hg concentration value by \(6.24 \times 10^{-11}\) to convert it from \(\mu\text{g}/\text{scfm}\) to lb/scf. In cases where an appropriate F-factor is not listed in Table 19–2 of Method 19, the permittee may use F-factors from Table 1 in section 3.3.5 of appendix F to part 75 of this chapter, or F-factors derived using the procedures in section 3.3.6 of appendix F to part 75 of this chapter. Also, for startup and shutdown hours, the permittee may calculate the Hg emission rate using the applicable diluent cap value specified in section 3.3.4.1 of appendix F to part 75 of this chapter, provided that the diluent gas monitor is not out-of-control and the hourly average \(O_2\) concentration is above 14.0% \(O_2\) (19.0% for an IGCC) or the hourly average \(CO_2\) concentration is below 5.0%
CO₂ (1.0% for an IGCC), as applicable. (40 CFR Part 63 Subpart UUUUU Appendix A 6.2.1.2)

iii) Multiply the lb/MMBtu value obtained in section 6.2.1.2 of this appendix by 10⁶ to convert it to lb/MBtu. (40 CFR Part 63 Subpart UUUUU Appendix A 6.2.1.3)

iv) The heat input-based Hg emission rate limit in Table 2 to this subpart must be met on a 30 boiler operating day rolling average basis, except as otherwise provided in §63.10009(a)(2). Use Equation 19–19 in EPA Method 19 to calculate the Hg emission rate for each averaging period. The term Eₜ in Equation 19–19 must be in the units of the applicable emission limit. Do not include non-operating hours with zero emissions in the average. (40 CFR Part 63 Subpart UUUUU Appendix A 6.2.1.4)

b) Electrical Output-Based Hg Emission Rates. Calculate electrical output-based Hg emission limits in units of lb/GWh, according to sections 6.2.2.1 through 6.2.2.3 of this appendix. (40 CFR Part 63 Subpart UUUUU Appendix A 6.2.2)

i) Calculate the Hg mass emissions for each operating hour in which valid data are obtained for all parameters, using Equation A-2 of this section (for wet-basis measurements of Hg concentration) or Equation A-3 of this section (for dry-basis measurements), as applicable: (40 CFR Part 63 Subpart UUUUU Appendix A 6.2.2.1)

\[ M_h = KC_s Q_h \]  \hspace{1cm} \text{(Equation A-2)}

Where:

\( M_h \) = Hg mass emission rate for the hour (lb/h)

\( K \) = Units conversion constant, \( 6.24 \times 10^{-11} \text{lb-scm/μg-scf} \)

\( C_s \) = Hourly average Hg concentration, wet basis (μg/scm)

\( Q_h \) = Stack gas volumetric flow rate for the hour (scfh).

(Note: Use unadjusted flow rate values; bias adjustment is not required)

\[ M_h = KC_s Q_h \left( 1 - B_{sw} \right) \]  \hspace{1cm} \text{(Equation A-3)}

Where:

\( M_h \) = Hg mass emission rate for the hour (lb/h)

\( K \) = Units conversion constant, \( 6.24 \times 10^{-11} \text{lb-scm/μg-scf} \).

\( C_s \) = Hourly average Hg concentration, dry basis (μg/dscm).

\( Q_h \) = Stack gas volumetric flow rate for the hour (scfh).

(Note: Use unadjusted flow rate values; bias adjustment is not required).

\( B_{sw} \) = Moisture fraction of the stack gas, expressed as a decimal (equal to % H₂O/100)
ii) Use Equation A–4 of this section to calculate the emission rate for each unit or stack operating hour in which valid data are obtained for all parameters. (40 CFR Part 63 Subpart UUUUUU Appendix A 6.2.2.2)

\[ E_{eo} = \frac{M_g}{(MW)_{h}} \times 10^3 \quad \text{(Equation A-4)} \]

Where:

- \( E_{eo} \) = Electrical output-based Hg emission rate (lb/GWh).
- \( M_g \) = Hg mass emission rate for the hour, from Equation A–2 or A–3 of this section, as applicable (lb/h).
- \( (MW)_{h} \) = Gross electrical load for the hour, in megawatts (MW).
- \( 10^3 \) = Conversion factor from megawatts to gigawatts.

iii) The applicable electrical output-based Hg emission rate limit in Table 1 or 2 to this subpart must be met on a 30-boiler operating day rolling average basis, except as otherwise provided in §63.10009(a)(2). Use Equation A–5 of this section to calculate the Hg emission rate for each averaging period. (40 CFR Part 63 Subpart UUUUUU Appendix A 6.2.2.3)

\[ \bar{E}_o = \frac{\sum E_{eo}}{n} \quad \text{(Equation A-5)} \]

Where:

- \( \bar{E}_o \) = Hg emission rate for the averaging period (lb/GWh).
- \( E_{eo} \) = Electrical output-based hourly Hg emission rate for unit or stack operating hour “h” in the averaging period, from Equation A–4 of this section (lb/GWh).
- \( n \) = Number of unit or stack operating hours in the averaging period in which valid data were obtained for all parameters.

(\textit{Note: Do not} include non-operating hours with zero emission rates in the average).

g. Recordkeeping and Reporting

1) Recordkeeping Provisions. For the Hg CEMS and/or sorbent trap monitoring systems and any other necessary monitoring systems installed at each affected unit, the owner or operator must maintain a file of all measurements, data, reports, and other information required by this appendix in a form suitable for inspection, for 5 years from the date of each record, in
accordance with §63.10033. The file shall contain the information in paragraphs 7.1.1 through 7.1.10 of this section. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1)

a) Monitoring Plan Records. For each affected unit or group of units monitored at a common stack, the owner or operator shall prepare and maintain a monitoring plan for the Hg CEMS and/or sorbent trap monitoring system(s) and any other monitoring system(s) (i.e., flow rate, diluent gas, or moisture systems) needed for routine operation of a sorbent trap monitoring system or to convert Hg concentrations to units of the applicable emission standard. The monitoring plan shall contain essential information on the continuous monitoring systems and shall document how the data derived from these systems ensure that all Hg emissions from the unit or stack are monitored and reported. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.1)

i) Updates. Whenever the owner or operator makes a replacement, modification, or change in a certified continuous monitoring system that is used to provide data under this subpart (including a change in the automated data acquisition and handling system or the flue gas handling system) which affects information reported in the monitoring plan (e.g., a change to a serial number for a component of a monitoring system), the owner or operator shall update the monitoring plan. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.1.1)

ii) Contents of the Monitoring Plan. For Hg CEMS and sorbent trap monitoring systems, the monitoring plan shall contain the information in sections 7.1.1.2.1 and 7.1.1.2.2 of this appendix, as applicable. For stack gas flow rate, diluent gas, and moisture monitoring systems, the monitoring plan shall include the information required for those systems under §75.53 (g) of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.1.2)

(1) Electronic. The electronic monitoring plan records must include the following:
- unit or stack ID number(s); monitoring location(s); the Hg monitoring methodologies used; Hg monitoring system information, including, but not limited to: Unique system and component ID numbers; the make, model, and serial number of the monitoring equipment; the sample acquisition method; formulas used to calculate Hg emissions; Hg monitor span and range information. The electronic monitoring plan shall be evaluated and submitted using the Emissions Collection and Monitoring Plan System (ECMPS) Client Tool provided by the Clean Air Markets Division in the Office of Atmospheric Programs of the EPA. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.1.2.1)

(2) Hard Copy. Keep records of the following: schematics and/or blueprints showing the location of the Hg monitoring system(s) and test ports; data flow diagrams; test protocols; monitor span and range calculations; miscellaneous technical justifications. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.1.2.2)

b) Operating Parameter Records. The owner or operator shall record the following information for each operating hour of each affected unit and also for each group of units utilizing a common stack, to the extent that these data are needed to convert Hg concentration data to the units of the emission standard. For non-operating hours, record only the items in paragraphs 7.1.2.1 and 7.1.2.2 of this section. If there is heat input to the unit(s), but no electrical load, record only the items in paragraphs 7.1.2.1, 7.1.2.2, and (if applicable) 7.1.2.4 of this section. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.2)

i) The date and hour; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.2.1)
ii) The unit or stack operating time (rounded up to the nearest fraction of an hour (in equal increments that can range from one hundredth to one quarter of an hour, at the option of the owner or operator); (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.2.2)
iii) The hourly gross unit load (rounded to nearest MW); and (40 CFR Part 63 Subpart (40 CFR Part 63 Subpart
UUUUU Appendix A 7.1.2.3)

iv) If applicable, the F-factor used to calculate the heat input-based Hg emission rate. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.2.4)

c) Hg Emissions Records (Hg CEMS). For each affected unit or common stack using a Hg CEMS, the owner or operator shall record the following information for each unit or stack operating hour: (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.3)

i) The date and hour; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.3.1)

ii) Monitoring system and component identification codes, as provided in the monitoring plan, if the CEMS provides a quality-assured value of Hg concentration for the hour; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.3.2)

iii) The hourly Hg concentration, if a quality-assured value is obtained for the hour (μg/scm, rounded to three significant figures); (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.3.3)

iv) A special code, indicating whether or not a quality-assured Hg concentration is obtained for the hour. This code may be entered manually when a temporary like-kind replacement Hg analyzer is used for reporting; and (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.3.4)

v) Monitor data availability, as a percentage of unit or stack operating hours, calculated according to §75.32 of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.3.5)

d) Hg Emissions Records (Sorbent Trap Monitoring Systems). For each affected unit or common stack using a sorbent trap monitoring system, each owner or operator shall record the following information for the unit or stack operating hour in each data collection period: (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.4)

i) The date and hour; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.4.1)

ii) Monitoring system and component identification codes, as provided in the monitoring plan, if the sorbent trap system provides a quality-assured value of Hg concentration for the hour; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.4.2)

iii) The hourly Hg concentration, if a quality-assured value is obtained for the hour (μg/scm, rounded to three significant figures). Note that when a quality-assured Hg concentration value is obtained for a particular data collection period, that single concentration value is applied to each operating hour of the data collection period. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.4.3)

iv) A special code, indicating whether or not a quality-assured Hg concentration is obtained for the hour; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.4.4)

v) The average flow rate of stack gas through each sorbent trap (in appropriate units, e.g., liters/min, cc/min, dscm/min); (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.4.5)

vi) The gas flow meter reading (in dscm, rounded to the nearest hundredth), at the beginning and end of the collection period and at least once in each unit operating hour during the collection period; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.4.6)

vii) The ratio of the stack gas flow rate to the sample flow rate, as described in section 12.2 of Performance Specification (PS) 12B in Appendix B to part 60 of this chapter; and (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.4.7)

viii) Monitor data availability, as a percentage of unit or stack operating hours, calculated according to §75.32 of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.4.8)

c) Stack Gas Volumetric Flow Rate Records. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.5)

i) Hourly measurements of stack gas volumetric flow rate during unit operation are required for routine operation of sorbent trap monitoring systems, to maintain the
required ratio of stack gas flow rate to sample flow rate (see section 8.2.2 of Performance Specification (PS) 12B in Appendix B to part 60 of this chapter). Hourly stack gas flow rate data are also needed in order to demonstrate compliance with electrical output-based Hg emissions limits, as provided in section 6.2.2 of this appendix. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.5.1)

ii) For each affected unit or common stack, if hourly measurements of stack gas flow rate are needed for sorbent trap monitoring system operation or to convert Hg concentrations to the units of the emission standard, use a flow rate monitor that meets the requirements of part 75 of this chapter to record the required data. The permittee must keep hourly flow rate records, as specified in §75.57(c)(2) of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.5.2)

f) Records of Stack Gas Moisture Content. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.6)

i) Correction of hourly Hg concentration data for moisture is sometimes required when converting Hg concentrations to the units of the applicable Hg emissions limit. In particular, these corrections are required: (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.6.1)

(1) For sorbent trap monitoring systems; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.6.1.1)

(2) For Hg CEMS that measure Hg concentration on a dry basis, when the permittee must calculate electrical output-based Hg emission rates; and (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.6.1.2)

(3) When using certain equations from EPA Method 19 in appendix A–7 to part 60 of this chapter to calculate heat input-based Hg emission rates. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.6.1.3)

ii) If hourly moisture corrections are required, either use a fuel-specific default moisture percentage from §75.11(b)(1) of this chapter or a certified moisture monitoring system that meets the requirements of part 75 of this chapter, to record the required data. If the permittee uses a moisture monitoring system, the permittee must keep hourly records of the stack gas moisture content, as specified in §75.57(c)(3) of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.6.2)

g) Records of Diluent Gas (CO 2 or O2) Concentration. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.7)

i) When a heat input-based Hg mass emissions limit must be met, in units of lb/TBtu, hourly measurements of CO2 or O2 concentration are required to convert Hg concentrations to units of the standard. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.7.1)

ii) If hourly measurements of diluent gas concentration are needed, use a certified CO2 or O2 monitor that meets the requirements of part 75 of this chapter to record the required data. The permittee must keep hourly CO2 or O2 concentration records, as specified in §75.57(g) of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.7.2)

h) Hg Emission Rate Records. For applicable Hg emission limits in units of lb/TBtu or lb/GWh, record the following information for each affected unit or common stack: (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.8)

i) The date and hour; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.8.1)

ii) The hourly Hg emissions rate (lb/TBtu or lb/GWh, as applicable, calculated according to section 6.2.1 or 6.2.2 of this appendix, rounded to three significant figures), if valid values of Hg concentration and all other required parameters (stack gas volumetric flow rate, diluent gas concentration, electrical load, and moisture data, as applicable) are obtained for the hour; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.8.2)
iii) An identification code for the formula (either the selected equation from Method 19 in section 6.2.1 of this appendix or Equation A–4 in section 6.2.2 of this appendix) used to derive the hourly Hg emission rate from Hg concentration, flow rate, electrical load, diluent gas concentration, and moisture data (as applicable); and (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.8.3)

iv) A code indicating that the Hg emission rate was not calculated for the hour, if valid data for Hg concentration and/or any of the other necessary parameters are not obtained for the hour. For the purposes of this appendix, the substitute data values required under part 75 of this chapter for diluent gas concentration, stack gas flow rate and moisture content are not considered to be valid data. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.8.4)

i) Certification and Quality Assurance Test Records. For any Hg CEMS and sorbent trap monitoring systems used to provide data under this subpart, record the following certification and quality-assurance information: (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.9)

   i) The reference values, monitor responses, and calculated calibration error (CE) values, and a flag to indicate whether the test was done using elemental or oxidized Hg, for all required 7-day calibration error tests and daily calibration error tests of the Hg CEMS; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.9.1)

   ii) The reference values, monitor responses, and calculated linearity error (LE) or system integrity error (SIE) values for all linearity checks of the Hg CEMS, and for all single-level and 3-level system integrity checks of the Hg CEMS; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.9.2)

   iii) The CEMS and reference method readings for each test run and the calculated relative accuracy results for all RATAs of the Hg CEMS and/or sorbent trap monitoring systems; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.9.3)

   iv) The stable stack gas and calibration gas readings and the calculated results for the upscale and downscale stages of all required cycle time tests of the Hg CEMS or, for a batch sampling Hg CEMS, the interval between measured Hg concentration readings; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.9.4)

   v) Supporting information for all required RATAs of the Hg monitoring systems, including records of the test dates, the raw reference method and monitoring system data, the results of sample analyses to substantiate the reported test results, and records of sampling equipment calibrations; (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.9.5)

   vi) For sorbent trap monitoring systems, also keep records of the results of all analyses of the sorbent traps used for routine daily operation of the system, and information documenting the results of all leak checks and the other applicable quality control procedures described in Table 12B–1 of Performance Specification (PS) 12B in appendix B to part 60 of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.9.6)

   vii) For stack gas flow rate, diluent gas, and (if applicable) moisture monitoring systems, the permittee must keep records of all certification, recertification, diagnostic, and ongoing quality-assurance tests of these systems, as specified in §75.59 of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix A 7.1.9.7)

2) Reporting Requirements. (40 CFR Part 63 Subpart UUUUU Appendix A 7.2)

   a) General Reporting Provisions. The owner or operator shall comply with the following requirements for reporting Hg emissions from each affected unit (or group of units monitored at a common stack) under this subpart: (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.1)
i) Notifications, in accordance with paragraph 7.2.2 of this section; (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.1.1)

ii) Monitoring plan reporting, in accordance with paragraph 7.2.3 of this section; (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.1.2)

iii) Certification, recertification, and QA test submittals, in accordance with paragraph 7.2.4 of this section; and (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.1.3)

iv) Electronic quarterly report submittals, in accordance with paragraph 7.2.5 of this section. (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.1.4)

b) Notifications. The owner or operator shall provide notifications for each affected unit (or group of units monitored at a common stack) under this subpart in accordance with §63.10030. (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.2)

c) Monitoring Plan Reporting. For each affected unit (or group of units monitored at a common stack) under this subpart using Hg CEMS or sorbent trap monitoring system to measure Hg emissions, the owner or operator shall make electronic and hard copy monitoring plan submittals as follows: (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.3)

i) Submit the electronic and hard copy information in section 7.1.1.2 of this appendix pertaining to the Hg monitoring systems at least 21 days prior to the applicable date in §63.9984. Also submit the monitoring plan information in §75.53.(g) pertaining to the flow rate, diluent gas, and moisture monitoring systems within that same time frame, if the required records are not already in place. (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.3.1)

ii) Whenever an update of the monitoring plan is required, as provided in paragraph 7.1.1.1 of this section. An electronic monitoring plan information update must be submitted either prior to or concurrent with the quarterly report for the calendar quarter in which the update is required. (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.3.2)

iii) All electronic monitoring plan submittals and updates shall be made to the Administrator using the ECMPS Client Tool. Hard copy portions of the monitoring plan shall be kept on record according to section 7.1 of this appendix. (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.3.3)

d) Certification, Recertification, and Quality-Assurance Test Reporting. Except for daily QA tests of the required monitoring systems ( i.e., calibration error tests and flow monitor interference checks), the results of all required certification, recertification, and quality-assurance tests described in paragraphs 7.1.9.1 through 7.1.9.7 of this section (except for test results previously submitted, e.g., under the ARP) shall be submitted electronically, using the ECMPS Client Tool, either prior to or concurrent with the relevant quarterly electronic emissions report. (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.4)

e) Quarterly Reports. (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.5)

i) Beginning with the report for the calendar quarter in which the initial compliance demonstration is completed or the calendar quarter containing the applicable date in §63.9984, the owner or operator of any affected unit shall use the ECMPS Client Tool to submit electronic quarterly reports to the Administrator, in an XML format specified by the Administrator, for each affected unit (or group of units monitored at a common stack) under this subpart. (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.5.1)

ii) The electronic reports must be submitted within 30 days following the end of each calendar quarter, except for units that have been placed in long-term cold storage. (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.5.2)

iii) Each electronic quarterly report shall include the following information: (40 CFR Part 63 Subpart UUUUU Appendix A 7.2.5.3)

(1) The date of report generation;
(2) Facility identification information;
(3) The information in paragraphs 7.1.2 through 7.1.8 of this section, as applicable to the Hg emission measurement methodology (or methodologies) used and the units of the Hg emission standard(s); and
(4) The results of all daily calibration error tests of the Hg CEMS, as described in paragraph 7.1.9.1 of this section and (if applicable) the results of all daily flow monitor interference checks.

iv) Compliance Certification. Based on reasonable inquiry of those persons with primary responsibility for ensuring that all Hg emissions from the affected unit(s) under this subpart have been correctly and fully monitored, the owner or operator shall submit a compliance certification in support of each electronic quarterly emissions monitoring report. The compliance certification shall include a statement by a responsible official with that official’s name, title, and signature, certifying that, to the best of his or her knowledge, the report is true, accurate, and complete. (40 CFR Part 63 Subpart UUUUUU Appendix A 7.2.5.4)

8. HCl and HF Monitoring Provisions

a. Monitoring of HCl and/or HF Emissions (40 CFR Part 63 Subpart UUUUUU Appendix B 2)

1) Monitoring System Installation Requirements. Install HCl and/or HF CEMS and any additional monitoring systems needed to convert pollutant concentrations to units of the applicable emissions limit in accordance with Performance Specification 15 for extractive Fourier Transform Infrared Spectroscopy (FTIR) continuous emissions monitoring systems in appendix B to part 60 of this chapter and §63.10010(a). (40 CFR Part 63 Subpart UUUUUU Appendix B 2.1)

2) Primary and Backup Monitoring Systems. The provisions pertaining to primary and redundant backup monitoring systems in section 2.2 of appendix A to this subpart apply to HCl and HF CEMS and any additional monitoring systems needed to convert pollutant concentrations to units of the applicable emissions limit. (40 CFR Part 63 Subpart UUUUUU Appendix B 2.2)

3) FTIR Monitoring System Equipment, Supplies, Definitions, and General Operation. The provisions of Performance Specification 15 Sections 2.0, 3.0, 4.0, 5.0, 6.0, and 10.0 apply. (40 CFR Part 63 Subpart UUUUUU Appendix B 2.3)

b. Initial Certification Procedures - the initial certification procedures for the HCl or HF CEMS used to provide data under this subpart are as follows: (40 CFR Part 63 Subpart UUUUUU Appendix B 3)

1) The HCl and/or HF CEMS must be certified according to Performance Specification 15 using the procedures for gas auditing and comparison to a reference method (RM) as specified in sections 3.1.1 and 3.1.2 below. (Please Note: EPA plans to publish a technology neutral performance specification and appropriate on-going quality-assurance requirements for HCl CEMS in the near future along with amendments to this appendix to accommodate their use.) (40 CFR Part 63 Subpart UUUUUU Appendix B 3.1)

a) The permittee must conduct a gas audit of the HCl and/or HF CEMS as described in section 9.1 of Performance Specification 15, with the exceptions listed in sections 3.1.2.1 and 3.1.2.2 below. (40 CFR Part 63 Subpart UUUUUU Appendix B 3.1.1)

i) The audit sample gas does not have to be obtained from the Administrator; however,
it must be (1) from a secondary source of certified gases (i.e., independent of any calibration gas used for the daily calibration assessments) and (2) directly traceable to National Institute of Standards and Technology (NIST) or VSL Dutch Metrology Institute (VSL) reference materials through an unbroken chain of comparisons. If audit gas traceable to NIST or VSL reference materials is not available, the permittee may use a gas with a concentration certified to a specified uncertainty by the gas manufacturer. (40 CFR Part 63 Subpart UUUUU Appendix B 3.1.1.1)

ii) Analyze the results of the gas audit using the calculations in section 12.1 of Performance Specification 15. The calculated correction factor (CF) from Eq. 6 of Performance Specification 15 must be between 0.85 and 1.15. The permittee does not have to test the bias for statistical significance. (40 CFR Part 63 Subpart UUUUU Appendix B 3.1.1.2)

b) The permittee must perform a relative accuracy test audit or RATA according to section 11.1.1.4 of Performance Specification 15 and the requirements below. Perform the RATA of the HCl or HF CEMS at normal load. Acceptable HCl/HF reference methods (RM) are Methods 26 and 26A in appendix A–8 to part 60 of this chapter, Method 320 in Appendix A to this part, or ASTM D6348–03 (Reapproved 2010) “Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy” (incorporated by reference, see §63.14), each applied based on the criteria set forth in Table 5 of this subpart. (40 CFR Part 63 Subpart UUUUU Appendix B 3.1.2)

i) When ASTM D6348–03 is used as the RM, the following conditions must be met: (40 CFR Part 63 Subpart UUUUU Appendix B 3.1.2.1)

1) The test plan preparation and implementation in the Annexes to ASTM D6348–03, Sections A1 through A8 are mandatory;
2) In ASTM D6348–03 Annex A5 (Analyze Spiking Technique), the percent (%) R must be determined for each target analyte (see Equation A5.5);
3) For the ASTM D6348–03 test data to be acceptable for a target analyte, %R must be $70\% \leq R \leq 130\%$; and
4) The %R value for each compound must be reported in the test report and all field measurements corrected with the calculated %R value for that compound using the following equation:

$$\text{Reported Result} = \frac{\text{Measured Concentration in Stack}}{\%R} \times 100 \quad (\text{Eq. B-1})$$

ii) The relative accuracy (RA) of the HCl or HF CEMS must be no greater than 20 percent of the mean value of the RM test data in units of ppm on the same moisture basis. Alternatively, if the mean RM value is less than 1.0 ppm, the RA results are acceptable if the absolute value of the difference between the mean RM and CEMS values does not exceed 0.20 ppm. (40 CFR Part 63 Subpart UUUUU Appendix B 3.1.2.2)

2) Any additional stack gas flow rate, diluent gas, and moisture monitoring system(s) needed to express pollutant concentrations in units of the applicable emissions limit must be certified according to part 75 of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix B 3.2)

c. Recertification Procedures
Whenever the owner or operator makes a replacement, modification, or change to a certified CEMS that may significantly affect the ability of the system to accurately measure or record pollutant or diluent gas concentrations, stack gas flow rates, or stack gas moisture content, the owner or operator shall recertify the monitoring system. Furthermore, whenever the owner or operator makes a replacement, modification, or change to the flue gas handling system or the unit operation that may significantly change the concentration or flow profile, the owner or operator shall recertify the monitoring system. The same tests performed for the initial certification of the monitoring system shall be repeated for recertification, unless otherwise specified by the Administrator. Examples of changes that require recertification include: Replacement of a gas analyzer; complete monitoring system replacement, and changing the location or orientation of the sampling probe. (40 CFR Part 63 Subpart UUUUU Appendix B 4)

d. On-Going Quality Assurance Requirements

1) For on-going QA test requirements for HCI and HF CEMS, implement the quality assurance/quality control procedures of Performance Specification 15 of appendix B to part 60 of this chapter as set forth in sections 5.1.1 through 5.3.2 of this appendix. (40 CFR Part 63 Subpart UUUUU Appendix B 5.1)
   a) On a daily basis, the permittee must assess the calibration error of the HCI or HF CEMS using either a calibration transfer standard as specified in Performance Specification 15 Section 10.1 which references Section 4.5 of the FTIR Protocol or a HCI and/or HF calibration gas at a concentration no greater than two times the level corresponding to the applicable emission limit. A calibration transfer standard is a substitute calibration compound chosen to ensure that the FTIR is performing well at the wavelength regions used for analysis of the target analytes. The measured concentration of the calibration transfer standard or HCI and/or HF calibration gas results must agree within ± 5 percent of the reference gas value after correction for differences in pressure. (40 CFR Part 63 Subpart UUUUU Appendix B 5.1.1)
   b) On a quarterly basis, the permittee must conduct a gas audit of the HCI and/or HF CEMS as described in section 3.1.1 of this appendix. For the purposes of this appendix, “quarterly” means once every “QA operating quarter” (as defined in section 3.1.20 of appendix A to this subpart). The permittee has the option to use HCI gas in lieu of HF gas for conducting this audit on an HF CEMS. To the extent practicable, perform consecutive quarterly gas audits at least 30 days apart. The initial quarterly audit is due in the first QA operating quarter following the calendar quarter in which certification testing of the CEMS is successfully completed. Up to three consecutive exemptions from the quarterly audit requirement are allowed for “non-QA operating quarters” (i.e., calendar quarters in which there are less than 168 unit or stack operating hours). However, no more than four consecutive calendar quarters may elapse without performing a gas audit, except as otherwise provided in section 5.3.3.2.1 of this appendix. (40 CFR Part 63 Subpart UUUUU Appendix B 5.1.2)
   c) The permittee must perform an annual relative accuracy test audit or RATA of the HCI or HF CEMS as described in section 3.1.2 of this appendix. Perform the RATA at normal load. For the purposes of this appendix, “annual” means once every four “QA operating quarters” (as defined in section 3.1.20 of appendix A to this subpart). The first annual RATA is due within four QA operating quarters following the calendar quarter in which the initial certification testing of the HCI or HF CEMS is successfully completed. The provisions in section 5.1.2.4 of appendix A to this subpart pertaining to RATA deadline extensions also apply. (40 CFR Part 63 Subpart UUUUU Appendix B 5.1.3)

2) Stack gas flow rate, diluent gas, and moisture monitoring systems must meet the applicable on-
going QA test requirements of part 75 of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix B 5.2)

3) Data Validation. (40 CFR Part 63 Subpart UUUUU Appendix B 5.3)

a) Out-of-Control Periods. A HCl or HF CEMS that is used to provide data under this appendix is considered to be out-of-control, and data from the CEMS may not be reported as quality-assured, when any acceptance criteria for a required QA test is not met. The HCl or HF CEMS is also considered to be out-of-control when a required QA test is not performed on schedule or within an allotted grace period. To end an out-of-control period, the QA test that was either failed or not done on time must be performed and passed. Out-of-control periods are counted as hours of monitoring system downtime. (40 CFR Part 63 Subpart UUUUU Appendix B 5.3.1)

b) Grace Periods. For the purposes of this appendix, a “grace period” is defined as a specified number of unit or stack operating hours after the deadline for a required quality-assurance test of a continuous monitor has passed, in which the test may be performed and passed without loss of data. (40 CFR Part 63 Subpart UUUUU Appendix B 5.3.2)

i) For the flow rate, diluent gas, and moisture monitoring systems described in section 5.2 of this appendix, a 168 unit or stack operating hour grace period is available for quarterly linearity checks, and a 720 unit or stack operating hour grace period is available for RATAs, as provided, respectively, in sections 2.2.4 and 2.3.3 of appendix B to part 75 of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix B 5.3.2.1)

ii) For the purposes of this appendix, if the deadline for a required gas audit or RATA of a HCl or HF CEMS cannot be met due to circumstances beyond the control of the owner or operator: (40 CFR Part 63 Subpart UUUUU Appendix B 5.3.2.2)

1) A 168 unit or stack operating hour grace period is available in which to perform the gas audit; or

2) A 720 unit or stack operating hour grace period is available in which to perform the RATA.

iii) If a required QA test is performed during a grace period, the deadline for the next test shall be determined as follows: (40 CFR Part 63 Subpart UUUUU Appendix B 5.3.2.3)

1) For a gas audit or RATA of the monitoring systems described in section 5.1 of this appendix, determine the deadline for the next gas audit or RATA (as applicable) in accordance with section 2.2.4(b) or 2.3.3(d) of appendix B to part 75 of this chapter; treat a gas audit in the same manner as a linearity check.

2) For the gas audit of a HCl or HF CEMS, the grace period test only satisfies the audit requirement for the calendar quarter in which the test was originally due. If the calendar quarter in which the grace period audit is performed is a QA operating quarter, an additional gas audit is required for that quarter.

3) For the RATA of a HCl or HF CEMS, the next RATA is due within three QA operating quarters after the calendar quarter in which the grace period test is performed.

c) Conditional Data Validation. For recertification and diagnostic testing of the monitoring systems that are used to provide data under this appendix, and for the required QA tests when non-redundant backup monitoring systems or temporary like-kind replacement analyzers are brought into service, the conditional data validation provisions in §§75.20(b)(3)(ii) through (b)(3)(ix) of this chapter may be used to avoid or minimize data loss. The allotted window of time to complete calibration tests and RATAs shall be as specified in §75.20(b)(3)(iv) of this chapter; the allotted window of time to complete a gas audit shall be the same as for a linearity check (i.e., 168 unit or stack operating hours). (40 CFR Part 63 Subpart UUUUU Appendix B 5.3.4)
e. Missing Data Requirements

For the purposes of this appendix, the owner or operator of an affected unit shall not substitute for missing data from HCl or HF CEMS. Any process operating hour for which quality-assured HCl or HF concentration data are not obtained is counted as an hour of monitoring system downtime. (40 CFR Part 63 Subpart UUUUU Appendix B 6)

f. Bias Adjustment

Bias adjustment of hourly emissions data from a HCl or HF CEMS is not required. (40 CFR Part 63 Subpart UUUUU Appendix B 7)

g. QA/QC Program Requirements - the owner or operator shall develop and implement a quality assurance/quality control (QA/QC) program for the HCl and/or HF CEMS that are used to provide data under this subpart. At a minimum, the program shall include a written plan that describes in detail (or that refers to separate documents containing) complete, step-by-step procedures and operations for the most important QA/QC activities. Electronic storage of the QA/QC plan is permissible, provided that the information can be made available in hard copy to auditors and inspectors. The QA/QC program requirements for the other monitoring systems described in section 5.2 of this appendix are specified in section 1 of appendix B to part 75 of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix B 8)

1) General Requirements for HCl and HF CEMS. (40 CFR Part 63 Subpart UUUUU Appendix B 8.1)
   a) Preventive Maintenance. Keep a written record of procedures needed to maintain the HCl and/or HF CEMS in proper operating condition and a schedule for those procedures. This shall, at a minimum, include procedures specified by the manufacturers of the equipment and, if applicable, additional or alternate procedures developed for the equipment. (40 CFR Part 63 Subpart UUUUU Appendix B 8.1.1)
   b) Recordkeeping and Reporting. Keep a written record describing procedures that will be used to implement the recordkeeping and reporting requirements of this appendix. (40 CFR Part 63 Subpart UUUUU Appendix B 8.1.2)
   c) Maintenance Records. Keep a record of all testing, maintenance, or repair activities performed on any HCl or HF CEMS in a location and format suitable for inspection. A maintenance log may be used for this purpose. The following records should be maintained: Date, time, and description of any testing, adjustment, repair, replacement, or preventive maintenance action performed on any monitoring system and records of any corrective actions associated with a monitor outage period. Additionally, any adjustment that may significantly affect a system’s ability to accurately measure emissions data must be recorded and a written explanation of the procedures used to make the adjustment(s) shall be kept. (40 CFR Part 63 Subpart UUUUU Appendix B 8.1.3)

2) Specific Requirements for HCl and HF CEMS. The following requirements are specific to HCl and HF CEMS: (40 CFR Part 63 Subpart UUUUU Appendix B 8.2)
   a) Keep a written record of the procedures used for each type of QA test required for each HCl and HF CEMS. Explain how the results of each type of QA test are calculated and evaluated. (40 CFR Part 63 Subpart UUUUU Appendix B 8.2.1)
   b) Explain how each component of the HCl and/or HF CEMS will be adjusted to provide correct responses to calibration gases after routine maintenance, repairs, or corrective
h. Data Reduction and Calculations

1) Design and operate the HCl and/or HF CEMS to complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. (40 CFR Part 63 Subpart UUUUU Appendix B 9.1)

2) Reduce the HCl and/or HF concentration data to hourly averages in accordance with §60.13(h)(2) of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix B 9.2)

3) Convert each hourly average HCl or HF concentration to an HCl or HF emission rate expressed in units of the applicable emissions limit. (40 CFR Part 63 Subpart UUUUU Appendix B 9.3)
   a) For heat input-based emission rates, select an appropriate emission rate equation from among Equations 19–1 through 19–9 in EPA Method 19 in appendix A–7 to part 60 of this chapter, to calculate the HCl or HF emission rate in lb/MMBtu. Multiply the HCl concentration value (ppm) by $9.43 \times 10^{-8}$ to convert it to lb/scf, for use in the applicable Method 19 equation. For HF, the conversion constant from ppm to lb/scf is $5.18 \times 10^{-8}$. (40 CFR Part 63 Subpart UUUUU Appendix B 9.3.1)
   b) For electrical output-based emission rates, first calculate the HCl or HF mass emission rate (lb/h), using an equation that has the general form of Equation A–2 or A–3 in appendix A to this subpart (as applicable), replacing the value of K with $9.43 \times 10^{-8}$lb/scf-ppm (for HCl) or $5.18 \times 10^{-8}$ (for HF) and defining $C_h$ as the hourly average HCl or HF concentration in ppm. Then, use Equation A–4 in appendix A to this subpart to calculate the HCl or HF emission rate in lb/GWh. If the applicable HCl or HF limit is expressed in lb/MWh, divide the result from Equation A–4 by 10. (40 CFR Part 63 Subpart UUUUU Appendix B 9.3.2)

4) Use Equation A–5 in appendix A of this subpart to calculate the required 30 operating day rolling average HCl or HF emission rates. Round off each 30 operating day average to two significant figures. The term $E_{main}$ Equation A–5 must be in the units of the applicable emissions limit. (40 CFR Part 63 Subpart UUUUU Appendix B 9.4)

i. Recordkeeping Requirements

1) For each HCl or HF CEMS installed at an affected source, and for any other monitoring system(s) needed to convert pollutant concentrations to units of the applicable emissions limit, the owner or operator must maintain a file of all measurements, data, reports, and other information required by this appendix in a form suitable for inspection, for 5 years from the date of each record, in accordance with §63.10033. The file shall contain the information in paragraphs 10.1.1 through 10.1.8 of this section. (40 CFR Part 63 Subpart UUUUU Appendix B 10.1)
   a) Monitoring Plan Records. For each affected unit or group of units monitored at a common stack, the owner or operator shall prepare and maintain a monitoring plan for the HCl and/or HF CEMS and any other monitoring system(s) (i.e., flow rate, diluent gas, or moisture systems) needed to convert pollutant concentrations to units of the applicable
emission standard. The monitoring plan shall contain essential information on the continuous monitoring systems and shall explain how the data derived from these systems ensure that all HCl or HF emissions from the unit or stack are monitored and reported. (40 CFR Part 63 Subpart UUUUUU Appendix B 10.1.1)

i) Updates. Whenever the owner or operator makes a replacement, modification, or change in a certified continuous HCl or HF monitoring system that is used to provide data under this subpart (including a change in the automated data acquisition and handling system or the flue gas handling system) which affects information reported in the monitoring plan (e.g., a change to a serial number for a component of a monitoring system), the owner or operator shall update the monitoring plan. (40 CFR Part 63 Subpart UUUUUU Appendix B 10.1.1.1)

ii) Contents of the Monitoring Plan. For HCl and/or HF CEMS, the monitoring plan shall contain the applicable electronic and hard copy information in sections 10.1.1.2.1 and 10.1.1.2.2 of this appendix. For stack gas flow rate, diluent gas, and moisture monitoring systems, the monitoring plan shall include the electronic and hard copy information required for those systems under §75.53 (g) of this chapter. The electronic monitoring plan shall be evaluated using the ECMPS Client Tool. (40 CFR Part 63 Subpart UUUUUU Appendix B 10.1.1.2)

(1) Electronic. Record the unit or stack ID number(s); monitoring location(s); the HCl or HF monitoring methodology used (i.e., CEMS); HCl or HF monitoring system information, including, but not limited to: unique system and component ID numbers; the make, model, and serial number of the monitoring equipment; the sample acquisition method; formulas used to calculate emissions; monitor span and range information (if applicable).

(2) Hard Copy. Keep records of the following: schematics and/or blueprints showing the location of the monitoring system(s) and test ports; data flow diagrams; test protocols; monitor span and range calculations (if applicable); miscellaneous technical justifications.

b) Operating Parameter Records. For the purposes of this appendix, the owner or operator shall record the following information for each operating hour of each affected unit or group of units utilizing a common stack, to the extent that these data are needed to convert pollutant concentration data to the units of the emission standard. For non-operating hours, record only the items in paragraphs 10.1.2.1 and 10.1.2.2 of this section. If there is heat input to the unit(s), but no electrical load, record only the items in paragraphs 10.1.2.1, 10.1.2.2, and (if applicable) 10.1.2.4 of this section. (40 CFR Part 63 Subpart UUUUUU Appendix B 10.1.2)

i) The date and hour;

ii) The unit or stack operating time (rounded up to the nearest fraction of an hour (in equal increments that can range from one hundredth to one quarter of an hour, at the option of the owner or operator);

iii) The hourly gross unit load (rounded to nearest MWge); and

iv) If applicable, the F-factor used to calculate the heat input-based pollutant emission rate.

c) HCl and/or HF Emissions Records. For HCl and/or HF CEMS, the owner or operator must record the following information for each unit or stack operating hour: (40 CFR Part 63 Subpart UUUUUU Appendix B 10.1.3)

i) The date and hour;

ii) Monitoring system and component identification codes, as provided in the electronic monitoring plan, for each hour in which the CEMS provides a quality-assured value of HCl or HF concentration (as applicable);

iii) The pollutant concentration, for each hour in which a quality-assured value is obtained.
For HCl and HF, record the data in parts per million (ppm), rounded to three significant figures.

iv) A special code, indicating whether or not a quality-assured HCl or HF concentration value is obtained for the hour. This code may be entered manually when a temporary like-kind replacement HCl or HF analyzer is used for reporting; and

v) Monitor data availability, as a percentage of unit or stack operating hours, calculated according to §75.32 of this chapter.

d) Stack Gas Volumetric Flow Rate Records. (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.4)

i) Hourly measurements of stack gas volumetric flow rate during unit operation are required to demonstrate compliance with electrical output-based HCl or HF emissions limits (i.e., lb/MWh or lb/GWh). (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.4.1)

ii) Use a flow rate monitor that meets the requirements of part 75 of this chapter to record the required data. The permittee must keep hourly flow rate records, as specified in §75.57(c)(2) of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.4.2)

e) Records of Stack Gas Moisture Content. (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.5)

i) Correction of hourly pollutant concentration data for moisture is sometimes required when converting concentrations to the units of the applicable Hg emissions limit. In particular, these corrections are required: (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.5.1)

(1) To calculate electrical output-based pollutant emission rates, when using a CEMS that measures pollutant concentrations on a dry basis; and (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.5.1.1)

(2) To calculate heat input-based pollutant emission rates, when using certain equations from EPA Method 19 in appendix A–7 to part 60 of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.5.1.2)

ii) If hourly moisture corrections are required, either use a fuel-specific default moisture percentage for coal-fired units from §75.11(b)(1) of this chapter, an Administrator approved default moisture value for non-coal-fired units (as per paragraph 63.10010(d) of this subpart), or a certified moisture monitoring system that meets the requirements of part 75 of this chapter, to record the required data. If the permittee elects to use a moisture monitoring system, the permittee must keep hourly records of the stack gas moisture content, as specified in §75.57(c)(3) of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.5.2)

f) Records of Diluent Gas (CO 2 or O 2 ) Concentration. (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.6)

i) To assess compliance with a heat input-based HCl or HF emission rate limit in units of lb/MMBtu, hourly measurements of CO2 or O2 concentration are required to convert pollutant concentrations to units of the standard. (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.6.1)

ii) If hourly measurements of diluent gas concentration are needed, the permittee must use a certified CO2 or O2 monitor that meets the requirements of part 75 of this chapter to record the required data. For all diluent gas monitors, the permittee must keep hourly CO2 or O2 concentration records, as specified in §75.57(g) of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.6.2)

g) HCl and HF Emission Rate Records. For applicable HCl and HF emission limits in units of lb/MMBtu, lb/MWh, or lb/GWh, record the following information for each affected unit or common stack: (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.7)
EMISSION UNIT LEVEL TERMS AND CONDITIONS

Cheswick Generating Station Major Source Operating Permit #0054r

i) The date and hour;

ii) The hourly HCl and/or HF emissions rate (lb/MMBtu, lb/MWh, or lb/GWh, as applicable, rounded to three significant figures), for each hour in which valid values of HCl or HF concentration and all other required parameters (stack gas volumetric flow rate, diluent gas concentration, electrical load, and moisture data, as applicable) are obtained for the hour;

iii) An identification code for the formula used to derive the hourly HCl or HF emission rate from HCl or HF concentration, flow rate, electrical load, diluent gas concentration, and moisture data (as applicable); and

iv) A code indicating that the HCl or HF emission rate was not calculated for the hour, if valid data for HCl or HF concentration and/or any of the other necessary parameters are not obtained for the hour. For the purposes of this appendix, the substitute data values required under part 75 of this chapter for diluent gas concentration, stack gas flow rate and moisture content are not considered to be valid data.

h) Certification and Quality Assurance Test Records. For the HCl and/or HF CEMS used to provide data under this subpart at each affected unit (or group of units monitored at a common stack), record the following information for all required certification, recertification, diagnostic, and quality-assurance tests: (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.8)

i) HCl and HF CEMS. (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.8.1)
   1) For all required daily calibrations (including calibration transfer standard tests) of the HCl or HF CEMS, record the test dates and times, reference values, monitor responses, and calculated calibration error values; (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.8.1.1)

   2) For gas audits of HCl or HF CEMS, record the date and time of each spiked and unspiked sample, the audit gas reference values and uncertainties. Keep records of all calculations and data analyses required under sections 9.1 and 12.1 of Performance Specification 15, and the results of those calculations and analyses. (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.8.1.2)

   3) For each RATA of a HCl or HF CEMS, record the date and time of each test run, the reference method(s) used, and the reference method and HCl or HF CEMS values. Keep records of the data analyses and calculations used to determine the relative accuracy. (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.8.1.3)

ii) Additional Monitoring Systems. For the stack gas flow rate, diluent gas, and moisture monitoring systems described in section 3.2 of this appendix, the permittee must keep records of all certification, recertification, diagnostic, and on-going quality-assurance tests of these systems, as specified in §75.59(a) of this chapter. (40 CFR Part 63 Subpart UUUUU Appendix B 10.1.8.2)

j) 11. Reporting Requirements

1) General Reporting Provisions. The owner or operator shall comply with the following requirements for reporting HCl and/or HF emissions from each affected unit (or group of units monitored at a common stack): (40 CFR Part 63 Subpart UUUUU Appendix B 11.1)

a) Notifications, in accordance with paragraph 11.2 of this section; (40 CFR Part 63 Subpart UUUUU Appendix B 11.1.1)
b) Monitoring plan reporting, in accordance with paragraph 11.3 of this section; (40 CFR Part 63 Subpart UUUUU Appendix B 11.1.2)

c) Certification, recertification, and QA test submittals, in accordance with paragraph 11.4 of this section; and (40 CFR Part 63 Subpart UUUUU Appendix B 11.1.3)

d) Electronic quarterly report submittals, in accordance with paragraph 11.5 of this section. (40 CFR Part 63 Subpart UUUUU Appendix B 11.1.4)

2) Notifications. The owner or operator shall provide notifications for each affected unit (or group of units monitored at a common stack) in accordance with §63.10030. (40 CFR Part 63 Subpart UUUUU Appendix B 11.2)

3) Monitoring Plan Reporting. For each affected unit (or group of units monitored at a common stack) using HCl and/or HF CEMS, the owner or operator shall make electronic and hard copy monitoring plan submittals as follows: (40 CFR Part 63 Subpart UUUUU Appendix B 11.3)

   a) Submit the electronic and hard copy information in section 10.1.1.2 of this appendix pertaining to the HCl and/or HF monitoring systems at least 21 days prior to the applicable date in §63.9984. Also, if applicable, submit monitoring plan information pertaining to any required flow rate, diluent gas, and/or moisture monitoring systems within that same time frame, if the required records are not already in place. (40 CFR Part 63 Subpart UUUUU Appendix B 11.3.1)

   b) Update the monitoring plan when required, as provided in paragraph 10.1.1.1 of this appendix. An electronic monitoring plan information update must be submitted either prior to or concurrent with the quarterly report for the calendar quarter in which the update is required. (40 CFR Part 63 Subpart UUUUU Appendix B 11.3.2)

   c) All electronic monitoring plan submittals and updates shall be made to the Administrator using the ECMPS Client Tool. Hard copy portions of the monitoring plan shall be kept on record according to section 10.1 of this appendix. (40 CFR Part 63 Subpart UUUUU Appendix B 11.3.3)

4) Certification, Recertification, and Quality-Assurance Test Reporting Requirements. Except for daily QA tests (i.e., calibrations and flow monitor interference checks), which are included in each electronic quarterly emissions report, use the ECMPS Client Tool to submit the results of all required certification, recertification, quality-assurance, and diagnostic tests of the monitoring systems required under this appendix electronically, either prior to or concurrent with the relevant quarterly electronic emissions report. (40 CFR Part 63 Subpart UUUUU Appendix B 11.4)

   a) For daily calibrations (including calibration transfer standard tests), report the information in §75.59(a)(1) of this chapter, excluding paragraphs (a)(1)(ix) through (a)(1)(xi). (40 CFR Part 63 Subpart UUUUU Appendix B 11.4.1)

   b) For each quarterly gas audit of a HCl or HF CEMS, report: (40 CFR Part 63 Subpart UUUUU Appendix B 11.4.2)

      i) Facility ID information;
      ii) Monitoring system ID number;
      iii) Type of test (e.g., quarterly gas audit);
      iv) Reason for test;
      v) Certified audit (spike) gas concentration value (ppm);
      vi) Measured value of audit (spike) gas, including date and time of injection;
      vii) Calculated dilution ratio for audit (spike) gas;
      viii) Date and time of each spiked flue gas sample;
      ix) Date and time of each unspiked flue gas sample;
      x) The measured values for each spiked gas and unspiked flue gas sample (ppm);
      xi) The mean values of the spiked and unspiked sample concentrations and the expected value of the spiked concentration as specified in section 12.1 of Performance
Specification 15 (ppm):

xii) Bias at the spike level as calculated using equation 3 in section 12.1 of Performance Specification 15; and


c) For each RATA of a HCl or HF CEMS, report: (40 CFR Part 63 Subpart UUUUU Appendix B 11.4.3)

i) Facility ID information;

ii) Monitoring system ID number;

iii) Type of test (i.e., initial or annual RATA);

iv) Reason for test;

v) The reference method used;

vi) Starting and ending date and time for each test run;

vii) Units of measure:

viii) The measured reference method and CEMS values for each test run, on a consistent moisture basis, in appropriate units of measure;

ix) Flags to indicate which test runs were used in the calculations;

x) Arithmetic mean of the CEMS values, of the reference method values, and of their differences;

xi) Standard deviation, as specified in Equation 2–4 of Performance Specification 2 in appendix B to part 60 of this chapter;

xii) Confidence coefficient, as specified in Equation 2–5 of Performance Specification 2 in appendix B to part 60 of this chapter; and

xiii) Relative accuracy calculated using Equation 2–6 of Performance Specification 2 in appendix B to part 60 of this chapter or, if applicable, according to the alternative procedure for low emitters described in section 3.1.2.2 of this appendix. If applicable use a flag to indicate that the alternative RA specification for low emitters has been applied.

d) Reporting Requirements for Diluent Gas, Flow Rate, and Moisture Monitoring Systems.

For the certification, recertification, diagnostic, and QA tests of stack gas flow rate, moisture, and diluent gas monitoring systems that are certified and quality-assured according to part 75 of this chapter, report the information in section 10.1.9.3 of this appendix. (40 CFR Part 63 Subpart UUUUU Appendix B 11.4.4)

5) Quarterly Reports. (40 CFR Part 63 Subpart UUUUU Appendix B 11.5)

a) Beginning with the report for the calendar quarter in which the initial compliance demonstration is completed or the calendar quarter containing the applicable date in §63.10005(g), (h), or (j) (whichever is earlier), the owner or operator of any affected unit shall use the ECMPs Client Tool to submit electronic quarterly reports to the Administrator, in an XML format specified by the Administrator, for each affected unit (or group of units monitored at a common stack). (40 CFR Part 63 Subpart UUUUU Appendix B 11.5.1)

b) The electronic reports must be submitted within 30 days following the end of each calendar quarter, except for units that have been placed in long-term cold storage. (40 CFR Part 63 Subpart UUUUU Appendix B 11.5.2)

c) Each electronic quarterly report shall include the following information: (40 CFR Part 63 Subpart UUUUU Appendix B 11.5.3)

i) The date of report generation;

ii) Facility identification information;

iii) The information in sections 10.1.2 through 10.1.7 of this appendix, as applicable to the type(s) of monitoring system(s) used to measure the pollutant concentrations and other
necessary parameters.
iv) The results of all daily calibrations (including calibration transfer standard tests) of the HCl or HF monitor as described in section 10.1.8.1.1 of this appendix; and
v) If applicable, the results of all daily flow monitor interference checks, in accordance with section 10.1.8.2 of this appendix.
d) Compliance Certification. Based on reasonable inquiry of those persons with primary responsibility for ensuring that all HCl and/or HF emissions from the affected unit(s) have been correctly and fully monitored, the owner or operator shall submit a compliance certification in support of each electronic quarterly emissions monitoring report. The compliance certification shall include a statement by a responsible official with that official’s name, title, and signature, certifying that, to the best of his or her knowledge, the report is true, accurate, and complete. (40 CFR Part 63 Subpart UUUUUU Appendix B 11.5.4)


a. In response to an action to enforce the standards set forth in §63.9991 the permittee may assert an affirmative defense to a claim for civil penalties for exceedances of such standards that are caused by malfunction, as defined at 40 CFR 63.2. Appropriate penalties may be assessed, however, if the permittee fails to meet the permittee’s burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief. To establish the affirmative defense in any action to enforce such a limit, the permittee must timely meet the notification requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that: (§63.10001(a))

1) The excess emissions: (§63.10001(a)(1))
   a) Were caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner, and
   b) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and
   c) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and
   d) Were not part of a recurring pattern indicative of inadequate design, operation, or maintenance.

2) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and (§63.10001(a)(2))

3) The frequency, amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions; and (§63.10001(a)(3))

4) If the excess emissions resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and (§63.10001(a)(4))

5) All possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health; and (§63.10001(a)(5))

6) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and (§63.10001(a)(6))
7) All of the actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs; and (§63.10001(a)(7))
8) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and (§63.10001(a)(8))
9) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the excess emissions resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction. (§63.10001(a)(9))

b. Notification. The owner or operator of the affected source experiencing an exceedance of its emission limit(s) during a malfunction shall notify the Administrator by telephone or facsimile (FAX) transmission as soon as possible, but no later than two business days after the initial occurrence of the malfunction or, if it is not possible to determine within two business days whether the malfunction caused or contributed to an exceedance, no later than two business days after the owner or operator knew or should have known that the malfunction caused or contributed to an exceedance, but, in no event later than two business days after the end of the averaging period, if it wishes to avail itself of an affirmative defense to civil penalties for that malfunction. The owner or operator seeking to assert an affirmative defense shall also submit a written report to the Administrator within 45 days of the initial occurrence of the exceedance of the standard in §63.9991 to demonstrate, with all necessary supporting documentation, that it has met the requirements set forth in paragraph (a) of this section. The owner or operator may seek an extension of this deadline for up to 30 additional days by submitting a written request to the Administrator before the expiration of the 45 day period. Until a request for an extension has been approved by the Administrator, the owner or operator is subject to the requirement to submit such report within 45 days of the initial occurrence of the exceedance. (§63.10001(b))

"PERMIT SHIELD” IN EFFECT.
ALTERTIVE OPERATING SCENARIOS

There are no alternative operating scenarios for this facility.
EMISSIONS LIMITATION SUMMARY

(This section is provided for informational purposes only and is not intended to be an applicable requirement.)

The tons/year emission limitations for the Cheswick Generating Station are summarized in the following table:

<table>
<thead>
<tr>
<th>POLLUTANT</th>
<th>ANNUAL EMISSION LIMIT (tons/year)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter</td>
<td>1.027</td>
</tr>
<tr>
<td>PM-10</td>
<td>569</td>
</tr>
<tr>
<td>PM-2.5</td>
<td>560</td>
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<tr>
<td>SO₂</td>
<td>13,923</td>
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<td>NOₓ</td>
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<td>CO</td>
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<td>VOC</td>
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<td>HF</td>
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<tr>
<td>Ammonia</td>
<td>49.5</td>
</tr>
<tr>
<td>Sulfuric Acid Mist</td>
<td>187.9</td>
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<tr>
<td>Lead, Pb</td>
<td>0.31</td>
</tr>
<tr>
<td>Mercury, Hg</td>
<td>0.032</td>
</tr>
</tbody>
</table>

* A year is defined as any consecutive 12-month period.
The following table summarizes the processes and/or activities conducted at the Cheswick Power Station that were determined to be insignificant.

**TABLE VIII-1**  
Insignificant Processes

<table>
<thead>
<tr>
<th>I.D.</th>
<th>SOURCE DESCRIPTION</th>
<th>BASIS FOR EXemption</th>
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</thead>
<tbody>
<tr>
<td>F-001</td>
<td>Boiler Bldg. Deaerator Drain Overboard to Waste</td>
<td>Water treatment/Inert gas emissions</td>
</tr>
<tr>
<td>F-002</td>
<td>Boiler Bldg. Chemical Cleaning Connections</td>
<td>Maintenance activity</td>
</tr>
<tr>
<td>F-003</td>
<td>Boiler Bldg. Bypass Line Drains</td>
<td>Maintenance activity</td>
</tr>
<tr>
<td>V-002</td>
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<tr>
<td>F-004, F-005</td>
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<td>Maintenance activity</td>
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<td>F-007</td>
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<td>F-008</td>
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<td>F-009</td>
<td>Boiler Blowoff Tank Acid Cleaning Conn.</td>
<td>Maintenance activity</td>
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<tr>
<td>V-013</td>
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<td>V-015</td>
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<tr>
<td>V-016</td>
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</tr>
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<td>F-011</td>
<td>Boiler Bldg. Economizer Inlet HDR Conn.</td>
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<td>F-016</td>
<td>Boiler Bldg. Condenser Tube Cleaning Conn.</td>
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<td>Boiler Bldg. Waste Neutralizing Tank Vent</td>
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<td>F-017</td>
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<td>I.D.</td>
<td>SOURCE DESCRIPTION</td>
<td>BASIS FOR EXEMPTION</td>
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<td>---------------------------------------------------------</td>
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<tr>
<td>F-032</td>
<td>Diesel Oil Pump &amp; Hose Station</td>
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<td>New Oil Storage Drum Area</td>
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<td>V-032</td>
<td>Pump House – Oil &amp; Solvent Storage</td>
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<td>F-043</td>
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<tr>
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<td>F-049</td>
<td>East &amp; West Switch Yards &amp; Open Lot</td>
<td>Equipment with no emissions</td>
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<td>F-054</td>
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<td>Material handling system with no emissions</td>
</tr>
<tr>
<td>V-041</td>
<td>Pump House</td>
<td>Water/wastewater treatment</td>
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<tr>
<td>V-042</td>
<td>Sump Pump Bldg.</td>
<td>Water/wastewater treatment</td>
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<tr>
<td>V-043</td>
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<tr>
<td>V-044</td>
<td>Turbine Oil Storage for Hydraulics</td>
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<td>F-058</td>
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</tr>
<tr>
<td>F-059</td>
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<tr>
<td>T-011</td>
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<td>Storage/distribution of fuel oil</td>
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APPENDIX A: ACID RAIN PERMIT

(ATTACHED)