State of Ohio Environmental Protection Agency

RE: DRAFT PERMIT TO INSTALL **CERTIFIED MAIL**
LAWRENCE COUNTY

Street Address: Mailing Address: Lazarus Gov. Center
Lazarus Gov. Center **TELE:** (614) 644-3020 **FAX:** (614) 644-2329

Application No: 07-00550
Fac ID: 0744000151

DATE: 5/6/2005

Lawrence Energy Center
Mark Chrisos
Calpine Lewis Wharf
Boston, MA 02110

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed of final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **$11850** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: **USEPA** **PCHD** **KY** **WV**

LAWRENCE COUNTY

PUBLIC NOTICE
OHIO ENVIRONMENTAL PROTECTION AGENCY
ISSUANCE OF DRAFT ACTION PERMIT
OF PERMIT TO INSTALL TO
LAWRENCE ENERGY CENTER, LLC

Public notice is hereby given that the Ohio Environmental Protection Agency (EPA) Division of Air Pollution Control has issued, on **5/6/2005**, a preliminary staff determination of air Permit to Install (PTI) application No. 07-00550 to Lawrence Energy Center, LLC. Lawrence Energy Center, LLC has applied for a PTI for three natural gas-fired combustion turbine generators (CTGs);three heat recovery steam generators (HRSGs), each of which will contain a natural gas-fired duct burner; a 22-cell mechanical draft cooling tower; a natural gas-fired auxiliary steam boiler; a diesel oil-fired emergency generator; a diesel oil-fired fire water pump; two natural gas-fired fuel preheaters. Total nominal facility output is about 1100 MW.
The proposed site is located on 280 acres of land in Lawrence County, situated along the north side of the Ohio River approximately 2 miles northwest of Worthington, Kentucky and approximately 5 miles northwest of Ironton, Ohio.

The proposed allowable criteria pollutant air emission rates which result from net increases at the facility are listed below, in tons per year.

Pollutant	Tons/yr
Nitrogen Oxides (NO_X)	578
Sulfur Dioxide (SO_2)	213
Particulate Matter*(PM)	342
Carbon Monoxide (CO)	1618
Volatile Organic Compounds(VOC)	449
Sulfuric Acid Mist (H_2SO_4)	49

This facility is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by U.S. EPA (40 CFR 52.21) and the Ohio EPA permit to install requirements (OAC 3745-31).

The U.S. EPA allows sources to consume no more than the maximum available ambient PSD increment(s) for each PSD pollutant. The Ohio EPA allows PSD sources to consume less than one half the available increment, with some exceptions. If more than 50% of the available increment is consumed, it should be demonstrated that the only potential constraint on future growth in the region would be on the applicant. The 24-hour PM10 did exceed one half the available increment. The Ohio EPA has required Lawrence Energy Center LLC to perform additional modeling. Peak 24-hor PM10 impacts were less than 10 ug/m3. Ohio EPA believes that future modeled impacts would allow for additional growth in the region, including Kentucky.

Within 30 days from the date of this notice, any interested party may submit comments or request a public hearing. Comments are to be sent to Cindy Charles of the Portsmouth Local Air Agency, 740 Second Street, Portsmouth, OH 45662.

Further information concerning this application, which is available for public inspection, may be secured from Cindy Charles of the Portsmouth Local Air Agency at the above address during normal business hours. Telephone number: (740) 353-5156.

DRAFT PERMIT TO INSTALL 07-00550

Application Number:	07-00550
Facility ID:	0744000151
Permit Fee:	**To be entered upon final issuance**
Name of Facility:	Lawrence Energy Center
Person to Contact:	Mark Chrisos
Address:	Calpine Lewis Wharf Boston, MA 02110

Location of proposed air contaminant source(s) [emissions unit(s)]:
US Rte 52
Hanging Rock, Ohio

Description of proposed emissions unit(s):
1100 MW combined cycle power plant consisting of three 180 MW Westinghouse 501F natural gas fired combustion turbines, three heat recovery steam generators (HRSGs) with duct burners.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

i. The date, place (as defined in the permit), and time of sampling or measurements.

ii. The date(s) analyses were performed.

iii. The company or entity that performed the analyses.

iv. The analytical techniques or methods used.

v. The results of such analyses.

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

b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

ii. Quarterly written reports of (i) any deviations from federally enforceable <u>emission limitations</u>, <u>operational restrictions</u>, <u>and control device operating parameter limitations</u>, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.
Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

6. General Requirements

a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.

b. It shall not be a defense for the 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 federally enforceable terms and conditions of this permit.

c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

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

e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

a. Any document (including reports) required to be submitted and required by a federally

applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

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

iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit To Operate Application

a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete

Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

B. State Only Enforceable Permit To Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

4. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may

be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

5. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

6. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

7. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other

emissions unit(s).

8. Construction Compliance Certification

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit To Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons Per Year
NOx	577.9
CO	1618.1
SO2	213.4
PE/PM_{10}	342.4
VOC	448.5
Ammonia	495.3
Formaldehyde	13.41
Sulfuric acid	9.3

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

1. PSD REQUIREMENTS

The source described in this Permit to Install is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency 40 CFR 52.21. The authority to apply and enforce the PSD regulations has been delegated to the Ohio Environmental Protection Agency. The terms and conditions of this permit and the requirements of the PSD regulations are also enforceable by the United States Environmental Protection Agency.

In accordance with 40 CFR 124.15, 124.19 and 124.20, the following shall apply: (1) the effective date of this permit shall be 30 days after the service of notice to any public commentors of the final decision to issue, modify, or revoke and re-issue the permit, unless the service notice is by mail, in which case the effective date of the permit shall be 30 days after the service of notice; and (2) if an appeal is made to the Environmental Protection Agency, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

Appeals will be addressed to:

United States Environmental Protection Agency
Environmental Appeals Board
401 M. Street, SW (MC-113do)
Washington, DC 20460

2. The following emissions units (EU) are also being installed as part of this project and their potential to emit (PTE) and other De Minimis or non-permitted sources located at the facility shall be included in emission calculations to demonstrate compliance with federal limits and regulations.

EU	BACT	Emissions
1000 kW diesel fired emergency generator*	use of low sulfur fuel	8.1 TPY NOx 6.4 TPY CO 0.62 TPY VOC 0.13 TPY SO2 0.25 TPY PE/PM_{10}
(1) diesel fired fire water pump*	use of low sulfur	3.1 TPY NOx 2.0 TPY CO

	fuel	0.75 TPY VOC 0.04 TPY SO2 0.21 TPY PE/PM_{10}
(2) natural gas fired gas preheaters	use of natural gas	1.3 TPY NOx 2.2 TPY CO 0.15 TPY VOC 0.16 TPY SO2 0.20 TPY PE/PM_{10}
(20) natural gas fired space heaters	use of natural gas	8.28 TPY NOx 3.50 TPY CO 0.48 TPY VOC 0.53 TPY SO2 0.66 TPY PE/PM_{10}

* subject to OAC rule 3745-31-03(A)(4), restricted to no more than 500 hours per 12 month rolling period.

3. The emissions of Hazardous Air Pollutants (HAPs), as defined in Section 112(b) of the Clean Air Act, from all emissions units located at this facility combined, shall not exceed 10 tons per year for an individual HAP and 25 tons per year for any combination of HAPs, per rolling 12 month period.
Potential HAP emissions are below 10 TPY for any single HAP (not including duct burners) and 25 TPY for combination of HAPs, therefore 112(g) does not apply to this facility. USEPA has determined that case-by-case MACT determinations under 40 CFR Part 63, subpart B do not apply to duct burners which are part of combined cycle systems because of the duct burners being considered an electric utility steam generating unit. [Federal Register. 40 CFR Part 63, May 25, 2000]

4. Requirements of 40 CFR Part 63, Subpart DDDDD--National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters

What this Subpart Covers

a. <u>§63.7480 What is the purpose of this subpart?</u>

This subpart establishes national emission limits and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limits and work practice standards.

b. §63.7485 Am I subject to this subpart?

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of HAP as defined in §63.2 or §63.760 (40 CFR part 63, subpart HH, National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities), except as specified in §63.7491.

c. §63.7490 What is the affected source of this subpart?

(a) This subpart applies to new, reconstructed, or existing affected sources as described in paragraphs (a)(1) and (2) of this section.

(1) The affected source of this subpart is the collection of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory located at a major source as defined in §63.7575.

(2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler or process heater located at a major source as defined in §63.7575.

(b) A boiler or process heater is new if you commence construction of the boiler or process heater after January 13, 2003, and you meet the applicability criteria at the time you commence construction.

(c) A boiler or process heater is reconstructed if you meet the reconstruction criteria as defined in §63.2, you commence reconstruction after January 13, 2003, and you meet the applicability criteria at the time you commence reconstruction.

(d) A boiler or process heater is existing if it is not new or reconstructed.

d. §63.7491 Are any boilers or process heaters not subject to this subpart?

The types of boilers and process heaters listed in paragraphs (a) through (o) of this section are not subject to this subpart.

(a) A municipal waste combustor covered by 40 CFR part 60, subpart AAAA, subpart BBBB or subpart Cb.

(b) A hospital/medical/infectious waste incinerator covered by 40 CFR part 60, subpart Ce or subpart Ec.

(c) An electric utility steam generating unit that is a fossil fuel-fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity, and supplies more than one-third of its potential electric output capacity, and more than 25 megawatts electrical output to any utility power distribution system for sale is considered an electric utility steam generating unit.

(d) A boiler or process heater required to have a permit under section 3005 of the Solid Waste Disposal Act or covered by 40 CFR part 63, subpart EEE (e.g., hazardous waste boilers).

(e) A commercial and industrial solid waste incineration unit covered by 40 CFR part 60, subpart CCCC or subpart DDDD.

(f) A recovery boiler or furnace covered by 40 CFR part 63, subpart MM.

(g) A boiler or process heater that is used specifically for research and development. This does not include units that only provide heat or steam to a process at a research and development facility.

(h) A hot water heater as defined in this subpart.

(i) A refining kettle covered by 40 CFR part 63, subpart X.

(j) An ethylene cracking furnace covered by 40 CFR part 63, subpart YY.

(k) Blast furnace stoves as described in the EPA document, entitled "National Emission Standards for Hazardous Air Pollutants (NESHAP) for Integrated Iron and Steel Plants - Background Information for Proposed Standards," (EPA-453/R-01-005).

(l) Any boiler and process heater specifically listed as an affected source in another standard(s) under 40 CFR part 63.

(m) Any boiler and process heater specifically listed as an affected source in another standard(s) established under section 129 of the Clean Air Act (CAA).

(n) Temporary boilers as defined in this subpart.

(o) Blast furnace gas fuel-fired boilers and process heaters as defined in this subpart.

e. §63.7495 When do I have to comply with this subpart?

(a) If you have a new or reconstructed boiler or process heater, you must comply with this subpart by September 13, 2004 or upon startup of your boiler or process heater, whichever is later.

(b) If you have an existing boiler or process heater, you must comply with this subpart no later than September 13, 2007.

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, paragraphs (c)(1) and (2) of this section apply to you.

(1) Any new or reconstructed boiler or process heater at the existing facility must be in compliance with this subpart upon startup.

(2) Any existing boiler or process heater at the existing facility must be in compliance with this subpart within 3 years after the facility becomes a major source.

(d) You must meet the notification requirements in §63.7545 according to the schedule in §63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.

Emission Limits and Work Practice Standards

f. §63.7499 What are the subcategories of boilers and process heaters?

(a) The subcategories of boilers and process heaters are large solid fuel, limited use solid fuel, small solid fuel, large liquid fuel, limited use liquid fuel, small liquid fuel, large gaseous fuel, limited use gaseous fuel, and small gaseous fuel. Each subcategory is defined in §63.7575.

(b) If you change an existing boiler or process heater in the large solid fuel subcategory such that its applicable subcategory also changes, and the change does not meet the definition of reconstruction as defined in subpart A of this part, you may choose to meet the applicable emission limits for the original large solid fuel subcategory.

g. §63.7500 What emission limits, work practice standards, and operating limits must I

meet?

(a) You must meet the requirements in paragraphs (a)(1) and (2) of this section.

(1) You must meet each emission limit and work practice standard in Table 1 to this subpart that applies to your boiler or process heater, except as provided under §63.7507.

(2) You must meet each operating limit in Tables 2 through 4 to this subpart that applies to your boiler or process heater. If you use a control device or combination of control devices not covered in Tables 2 through 4 to this subpart, or you wish to establish and monitor an alternative operating limit and alternative monitoring parameters, you must apply to the United States Environmental Protection Agency (EPA) Administrator for approval of alternative monitoring under §63.8(f).

(b) As provided in §63.6(g), EPA may approve use of an alternative to the work practice standards in this section.

General Compliance Requirements

h. §63.7505 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limits (including operating limits) and the work practice standards in this subpart at all times, except during periods of startup, shutdown, and malfunction.

(b) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in §63.6(e)(1)(i).

(c) You can demonstrate compliance with any applicable emission limit using fuel analysis if the emission rate calculated according to §63.7530(d) is less than the applicable emission limit. Otherwise, you must demonstrate compliance using performance testing.

(d) If you demonstrate compliance with any applicable emission limit through performance testing, you must develop a site-specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under §63.8(f).

(1) For each continuous monitoring system (CMS) required in this section, you must develop and submit to the EPA Administrator for approval a site-specific monitoring plan that addresses paragraphs (d)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan at least 60 days before your initial performance evaluation of your CMS.

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations).

(2) In your site-specific monitoring plan, you must also address paragraphs (d)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1), (3), and (4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d); and

(iii) Ongoing record keeping and reporting procedures in accordance with the general requirements of §63.10(c), (e)(1), and (e)(2)(i).

(3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

(e) If you have an applicable emission limit or work practice standard, you must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in §63.6(e)(3).

i. <u>§63.7506 Do any boilers or process heaters have limited requirements</u>?

(a) New or reconstructed boilers and process heaters in one of the liquid fuel subcategories (the large liquid fuel subcategory, the limited use liquid fuel subcategory, or the small liquid fuel subcategory) that burn only fossil fuels and other gases and do not burn any residual oil are subject to the emission limits and

applicable work practice standards in Table 1 to this subpart. You are not required to conduct a performance test to demonstrate compliance with the emission limits. You are not required to set and maintain operating limits to demonstrate continuous compliance with the emission limits. However, you must meet the requirements in paragraphs (a)(1) and (2) of this section.

(1) To demonstrate initial compliance, you must include a signed statement in the Notification of Compliance Status report required in §63.7545(e) that indicates you burn only liquid fossil fuels other than residual oils, either alone or in combination with gaseous fuels.

(2) To demonstrate continuous compliance with the applicable emission limits, you must also keep records that demonstrate that you burn only liquid fossil fuels other than residual oils, either alone or in combination with gaseous fuels. You must also include a signed statement in each semiannual compliance report required in §63.7550 that indicates you burned only liquid fossil fuels other than residual oils, either alone or in combination with gaseous fuels, during the reporting period.

(b) The affected boilers and process heaters listed in paragraphs (b)(1) through (3) of this section are subject to only the initial notification requirements in §63.9(b) (i.e., they are not subject to the emission limits, work practice standards, performance testing, monitoring, SSMP, site-specific monitoring plans, record keeping and reporting requirements of this subpart or any other requirements in subpart A of this part).

(1) Existing large and limited use gaseous fuel units.

(2) Existing large and limited use liquid fuel units.

(3) New small liquid fuel units that burn only gaseous fuels or distillate oil. New small liquid fuel boilers and process heaters that commence burning of any other type of liquid fuel must comply with all applicable requirements of this subpart and subpart A of this part upon startup of burning the other type of liquid fuel.

(c) The affected boilers and process heaters listed in paragraphs (c)(1) through (4) of this section are not subject to the initial notification requirements in §63.9(b) and are not subject to any requirements in this subpart or in subpart A of this part (i.e., they are not subject to the emission limits, work practice standards, performance testing, monitoring, SSM plans, site-specific monitoring plans, record keeping and reporting requirements of this subpart, or any other requirements in subpart A of this part.

(1) Existing small solid fuel boilers and process heaters.

(2) Existing small liquid fuel boilers and process heaters.

(3) Existing small gaseous fuel boilers and process heaters.

(4) New small gaseous fuel units.

j. §63.7507 What are the health-based compliance alternatives for the hydrogen chloride (HCl) and total selected metals (TSM) standards?

(a) As an alternative to the requirement for large solid fuel boilers located at a single facility to demonstrate compliance with the HCl emission limit in Table 1 to this subpart, you may demonstrate eligibility for the health-based compliance alternative for HCl emissions under the procedures prescribed in appendix A to this subpart.

(b) In lieu of complying with the TSM emission standards in Table 1 to this subpart based on the sum of emissions for the eight selected metals, you may demonstrate eligibility for complying with the TSM emission standards in Table 1 based on the sum of emissions for seven selected metals (by excluding manganese emissions from the summation of TSM emissions) under the procedures prescribed in appendix A of this subpart.

Testing, Fuel Analyses, and Initial Compliance Requirements

k. §63.7510 What are my initial compliance requirements and by what date must I conduct them?

(a) For affected sources that elect to demonstrate compliance with any of the emission limits of this subpart through performance testing, your initial compliance requirements include conducting performance tests according to §63.7520 and Table 5 to this subpart, conducting a fuel analysis for each type of fuel burned in your boiler or process heater according to §63.7521 and Table 6 to this subpart, establishing operating limits according to §63.7530 and Table 7 to this subpart, and conducting CMS performance evaluations according to §63.7525.

(b) For affected sources that elect to demonstrate compliance with the emission limits for HCl, mercury, or TSM through fuel analysis, your initial compliance requirement is to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to §63.7521 and Table 6 to this subpart and establish operating limits according to §63.7530 and Table 8 to this subpart.

(c) For affected sources that have an applicable work practice standard, your initial compliance requirements depend on the subcategory and rated capacity of your boiler or process heater. If your boiler or process heater is in any of the limited use subcategories or has a heat input capacity less than 100 MMBtu per hour, your initial compliance demonstration is conducting a performance test for carbon monoxide according to Table 5 to this subpart. If your boiler or process heater is in any of the large subcategories and has a heat input capacity of 100 MMBtu per hour or greater, your initial compliance demonstration is conducting a performance evaluation of your continuous emission monitoring system for carbon monoxide according to §63.7525(a).

(d) For existing affected sources, you must demonstrate initial compliance no later than 180 days after the compliance date that is specified for your source in §63.7495 and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to this subpart.

(e) If your new or reconstructed affected source commenced construction or reconstruction between January 13, 2003 and September 13, 2004, you must demonstrate initial compliance with either the proposed emission limits and work practice standards or the promulgated emission limits and work practice standards no later than 180 days after March 14, 2005 or within 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(f) If your new or reconstructed affected source commenced construction or reconstruction between January 13, 2003, and September 13, 2004, and you chose to comply with the proposed emission limits and work practice standards when demonstrating initial compliance, you must conduct a second compliance demonstration for the promulgated emission limits and work practice standards within 3 years after September 13, 2007 or within 3 years after startup of the affected source, whichever is later.

(g) If your new or reconstructed affected source commences construction or reconstruction after September 13, 2005, you must demonstrate initial compliance with the promulgated emission limits and work practice standards no later than 180 days after startup of the source.

l. <u>§63.7515 When must I conduct subsequent performance tests or fuel analyses?</u>

(a) You must conduct all applicable performance tests according to §63.7520 on an annual basis, unless you follow the requirements listed in paragraphs (b) through (d) of this section. Annual performance tests must be completed between 10 and 12 months after the previous performance test, unless you follow the requirements listed in paragraphs (b) through (d) of this section.

(b) You can conduct performance tests less often for a given pollutant if your

performance tests for the pollutant (particulate matter, HCl, mercury, or TSM) for at least 3 consecutive years show that you comply with the emission limit. In this case, you do not have to conduct a performance test for that pollutant for the next 2 years. You must conduct a performance test during the third year and no more than 36 months after the previous performance test.

(c) If your boiler or process heater continues to meet the emission limit for particulate matter, HCl, mercury, or TSM, you may choose to conduct performance tests for these pollutants every third year, but each such performance test must be conducted no more than 36 months after the previous performance test.

(d) If a performance test shows noncompliance with an emission limit for particulate matter, HCl, mercury, or TSM, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 3-year period show compliance.

(e) If you have an applicable work practice standard for carbon monoxide and your boiler or process heater is in any of the limited use subcategories or has a heat input capacity less than 100 MMBtu per hour, you must conduct annual performance tests for carbon monoxide according to §63.7520. Each annual performance test must be conducted between 10 and 12 months after the previous performance test.

(f) You must conduct a fuel analysis according to §63.7521 for each type of fuel burned no later than 5 years after the previous fuel analysis for each fuel type. If you burn a new type of fuel, you must conduct a fuel analysis before burning the new type of fuel in your boiler or process heater. You must still meet all applicable continuous compliance requirements in §63.7540.

(g) You must report the results of performance tests and fuel analyses within 60 days after the completion of the performance tests or fuel analyses. This report should also verify that the operating limits for your affected source have not changed or provide documentation of revised operating parameters established according to §63.7530 and Table 7 to this subpart, as applicable. The reports for all subsequent performance tests and fuel analyses should include all applicable information required in §63.7550.

m. <u>§63.7520 What performance tests and procedures must I use?</u>

(a) You must conduct all performance tests according to §63.7(c), (d), (f), and (h). You must also develop a site-specific test plan according to the requirements in §63.7(c) if you elect to demonstrate compliance through performance testing.

(b) You must conduct each performance test according to the requirements in Table 5 to this subpart.

(c) New or reconstructed boilers or process heaters in one of the liquid fuel subcategories that burn only fossil fuels and other gases and do not burn any residual oil must demonstrate compliance according to §63.7506(a).

(d) You must conduct each performance test under the specific conditions listed in Tables 5 and 7 to this subpart. You must conduct performance tests at the maximum normal operating load while burning the type of fuel or mixture of fuels that have the highest content of chlorine, mercury, and total selected metals, and you must demonstrate initial compliance and establish your operating limits based on these tests. These requirements could result in the need to conduct more than one performance test.

(e) You may not conduct performance tests during periods of startup, shutdown, or malfunction.

(f) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.

(g) To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 of appendix A to part 60 of this chapter to convert the measured particulate matter concentrations, the measured HCl concentrations, the measured TSM concentrations, and the measured mercury concentrations that result from the initial performance test to pounds per million Btu heat input emission rates using F-factors.

n. §63.7521 What fuel analyses and procedures must I use?

(a) You must conduct fuel analyses according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable.

(b) You must develop and submit a site-specific fuel analysis plan to the EPA Administrator for review and approval according to the following procedures and requirements in paragraphs (b)(1) and (2) of this section.

(1) You must submit the fuel analysis plan no later than 180 days before the date that you intend to demonstrate compliance.

(2) You must include the information contained in paragraphs (b)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all fuel types anticipated to be burned in each boiler or process heater.

(ii) For each fuel type, the notification of whether you or a fuel supplier will be conducting the fuel analysis.

(iii) For each fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the composite samples if your procedures are different from paragraph (c) or (d) of this section. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types.

(iv) For each fuel type, the analytical methods, with the expected minimum detection levels, to be used for the measurement of selected total metals, chlorine, or mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that will be used.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(c) At a minimum, you must obtain three composite fuel samples for each fuel type according to the procedures in paragraph (c)(1) or (2) of this section.

(1) If sampling from a belt (or screw) feeder, collect fuel samples according to paragraphs (c)(1)(i) and (ii) of this section.

(i) Stop the belt and withdraw a 6-inch wide sample from the full cross-section of the stopped belt to obtain a minimum two pounds of sample. Collect all the material (fines and coarse) in the full cross-section. Transfer the sample to a clean plastic bag.

(ii) Each composite sample will consist of a minimum of three samples collected at approximately equal intervals during the testing period.

(2) If sampling from a fuel pile or truck, collect fuel samples according to paragraphs (c)(2)(i) through (iii) of this section.

(i) For each composite sample, select a minimum of five sampling locations uniformly spaced over the surface of the pile.

(ii) At each sampling site, dig into the pile to a depth of 18 inches. Insert a clean flat square shovel into the hole and withdraw a sample, making sure that large pieces do not fall off during sampling.

(iii) Transfer all samples to a clean plastic bag for further processing.

(d) Prepare each composite sample according to the procedures in paragraphs (d)(1) through (7) of this section.

(1) Throughly mix and pour the entire composite sample over a clean plastic sheet.

(2) Break sample pieces larger than 3 inches into smaller sizes.

(3) Make a pie shape with the entire composite sample and subdivide it into four equal parts.

(4) Separate one of the quarter samples as the first subset.

(5) If this subset is too large for grinding, repeat the procedure in paragraph (d)(3) of this section with the quarter sample and obtain a one-quarter subset from this sample.

(6) Grind the sample in a mill.

(7) Use the procedure in paragraph (d)(3) of this section to obtain a one-quarter subsample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

(e) Determine the concentration of pollutants in the fuel (mercury, chlorine, and/or total selected metals) in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 6 to this subpart.

o. <u>§63.7522 Can I use emission averaging to comply with this subpart?</u>

(a) As an alternative to meeting the requirements of §63.7500, if you have more than one existing large solid fuel boiler located at your facility, you may demonstrate compliance by emission averaging according to the procedures in this section in a State that does not choose to exclude emission averaging.

(b) For each existing large solid fuel boiler in the averaging group, the emission rate achieved during the initial compliance test for the HAP being averaged must not exceed the emission level that was being achieved on November 13, 2004 or the control technology employed during the initial compliance test must not be less effective for the HAP being averaged than the control technology employed on November 13, 2004.

(c) You may average particulate matter or TSM, HCl, and mercury emissions from existing large solid fuel boilers to demonstrate compliance with the limits in Table 1 to this subpart if you satisfy the requirements in paragraphs (d), (e), and (f) of this section.

(d) The weighted average emissions from the existing large solid fuel boilers participating in the emissions averaging option must be in compliance with the limits in Table 1 to this subpart at all times following the compliance date specified in §63.7495.

(e) You must demonstrate initial compliance according to paragraphs (e)(1) or (2).

(1) You must use equation 1 of this section to demonstrate that the particulate matter or TSM, HCl, and mercury emissions from all existing large solid fuel boilers participating in the emissions averaging option do not exceed the emission limits in Table 1 to this subpart.

$$AveWeightedEmissions = \sum_{i=1}^{n} (Er \times Sm \times Cf) \div \sum_{i=1}^{n} Sm \times Cf \qquad \textbf{(Eq. 1)}$$

where:

AveWeighted = Average weighted emissions for particulate matter or TSM, HCl, or mercury,

Emissions in units of pounds per million Btu of heat input;

Er = Emission rate (as calculated according to Table 5 to this subpart) or fuel analysis (as calculated by the applicable equation in §63.7530(d)) for boiler, i, for particulate matter or TSM, HCl, or mercury, in units of pounds per million Btu of heat input;

Hm = Maximum rated heat input capacity of boiler, i, in units of million Btu per hour;

n = Number of large solid fuel boilers participating in the emissions averaging option.

(2) If you are not capable of monitoring heat input, you can use equation 2 of this section as an alternative to using equation 1 of this section to demonstrate that the particulate matter or TSM, HCl, and mercury emissions from all existing large solid fuel boilers participating in the emissions averaging option do not exceed the emission limits in Table 1 to this subpart.

$$AveWeightedEmissions = \sum_{i=1}^{n} (Er \times Hm) \div \sum_{i=1}^{n} Hm \qquad \textbf{\textit{(Eq. 2)}}$$

where:

AveWeighted Emissions = Average weighted emission level for PM or TSM, HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as calculated according to Table 5 to this subpart) or fuel analysis (as calculated by the applicable equation in §63.7530(d)) for boiler, i, for particulate matter or TSM, HCl, or mercury, in units of pounds per million Btu of heat input.

Sm = Maximum steam generation by boiler, i, in units of pounds.

Cf = Conversion factor, calculated from the most recent compliance test, in units of million Btu of heat input

per pounds of steam generated.

(f) You must demonstrate continuous compliance on a 12-month rolling average basis determined at the end of every month (12 times per year) according to paragraphs (f)(1) and (2). The first 12-month rolling-average period begins on the compliance date specified in §63.7495.

(1) For each calendar month, you must use equation 3 of this section to calculate the 12-month rolling average weighted emission limit using the actual heat capacity for each existing large solid fuel boiler participating in the emissions averaging option.

$$AveWeightedEmissions = \sum_{i=1}^{n} (Er \times Hb) \div \sum_{i=1}^{n} Hb \qquad \textbf{\textit{(Eq. 3)}}$$

where:

AveWeighted Emissions	=	12-month rolling average weighted emission level for particulate matter or TSM, HCl, or mercury, in units of pounds per million Btu of heat input.
Er	=	Emission rate, calculated during the most recent compliance test,(as calculated according to Table 5 to this subpart) or fuel analysis (as calculated by the applicable equation in §63.7530(d)) for boiler, i, for particulate matter or TSM, HCl, or mercury, in units of pounds per million Btu of heat input.
Hb	=	The average heat input for each calendar month of boiler, i, in units of million Btu
n	=	Number of large solid fuel boilers participating in the emissions averaging option.

(2) If you are not capable of monitoring heat input, you can use equation 4 of this section as an alternative to using equation 3 of this section to calculate the 12-month rolling average weighted emission limit using the actual steam generation from the large solid fuel boilers participating in the emissions averaging option.

$$AveWeightedEmissions = \sum_{i=1}^{n} (Er \times Sa \times Cf) \div \sum_{i=1}^{n} Sa \times Cf \quad \textbf{(Eq. 4)}$$

where:

AveWeighted Emissions	=	12-month rolling average weighted emission level for PM or TSM, HCl, or mercury, in units of pounds per million Btu of heat input.
Er	=	Emission rate, calculated during the most recent compliance test(as calculated according to Table 5 to this subpart) or fuel analysis (as calculated by the applicable equation in §63.7530(d)) for boiler, i, for particulate matter or TSM, HCl, or mercury, in units of pounds per million Btu of heat input.
Sa	=	Actual steam generation for each calender month by boiler, i, in units of pounds.
Cf	=	Conversion factor, as calculated during the most recent compliance test,in units of million Btu of heat input per pounds of steam generated.

(g) You must develop and submit an implementation plan for emission averaging to the applicable regulatory authority for review and approval according to the following procedures and requirements in paragraphs (f)(1) through (4).

(1) You must submit the implementation plan no later than 180 days before the date that the facility intends to demonstrate compliance using the emission averaging option.

(2) You must include the information contained in paragraphs (2)(i) through (vii) of this section in your implementation plan for all emission sources included in an emissions average:

(i) The identification of all existing large solid fuel boilers in the averaging group, including for each either the applicable HAP emission level or the control technology installed on;

(ii) The process parameter (heat input or steam generated) that will be monitored for each averaging group of large solid fuel boilers;

(iii) The specific control technology or pollution prevention measure to be used for each emission source in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple sources, the owner or operator must identify each source;

(iv) The test plan for the measurement of particulate matter (or TSM), HCl, or mercury emissions in accordance with the requirements in §63.7520;

(v) The operating parameters to be monitored for each control system or device and a description of how the operating limits will be determined;

(vi) If you request to monitor an alternative operating parameter pursuant to §63.7525, you must also include:

(A) A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); and

(B) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device; the frequency and content of monitoring, reporting, and record keeping requirements; and a demonstration, to the satisfaction of the applicable regulatory authority, that the proposed monitoring frequency is sufficient to represent control device operating conditions; and

(vii) A demonstration that compliance with each of the applicable emission limit(s) will be achieved under representative operating conditions.

(3) Upon receipt, the regulatory authority shall review and approve or disapprove the plan according to the following criteria:

(i) Whether the content of the plan includes all of the information specified in paragraph (f)(2) of this section; and

(ii) Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.

(4) The applicable regulatory authority shall not approve an emission averaging implementation plan containing any of the following provisions:

(i) Any averaging between emissions of differing pollutants or between differing sources; or

(ii) The inclusion of any emission source other than an existing large solid fuel boiler.

p. §63.7525 What are my monitoring, installation, operation, and maintenance requirements?

(a) If you have an applicable work practice standard for carbon monoxide, and your boiler or process heater is in any of the large subcategories and has a heat input capacity of 100 MMBtu per hour or greater, you must install, operate, and maintain a continuous emission monitoring system (CEMS) for carbon monoxide according to the procedures in paragraphs (a)(1) through (6) of this section by the compliance date specified in §63.7495.

(1) Each CEMS must be installed, operated, and maintained according to Performance Specification (PS) 4A of 40 CFR part 60, appendix B, and according to the site-specific monitoring plan developed according to §63.7505(d).

(2) You must conduct a performance evaluation of each CEMS according to the requirements in §63.8 and according to PS 4A of 40 CFR part 60, appendix B.

(3) Each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(4) The CEMS data must be reduced as specified in §63.8(g)(2).

(5) You must calculate and record a 30-day rolling average emission rate on a daily basis. A new 30-day rolling average emission rate is calculated as the average of all of the hourly CO emission data for the preceding 30 operating days.

(6) For purposes of calculating data averages, you must not use data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, required quality assurance or control activities, or when your boiler or process heater is operating at less than 50 percent of its rated capacity. You must use all the data collected during all other periods in assessing compliance. Any period for which the monitoring system is out of control and data are not available for required calculations constitutes a deviation from the monitoring requirements.

(b) If you have an applicable opacity operating limit, you must install, operate, certify

and maintain each continuous opacity monitoring system (COMS) according to the procedures in paragraphs (b)(1) through (7) of this section by the compliance date specified in §63.7495.

(1) Each COMS must be installed, operated, and maintained according to PS 1 of 40 CFR part 60, appendix B.

(2) You must conduct a performance evaluation of each COMS according to the requirements in §63.8 and according to PS 1 of 40 CFR part 60, appendix B.

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

(4) The COMS data must be reduced as specified in §63.8(g)(2).

(5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in §63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of §63.8(e). Identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit.

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

(c) If you have an operating limit that requires the use of a CMS, you must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to the procedures in paragraphs (c)(1) through (5) of this section by the compliance date specified in §63.7495.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four successive cycles of operation to have a valid hour of data.

(2) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must conduct all monitoring in continuous operation at all times that the unit is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(3) For purposes of calculating data averages, you must not use data recorded during monitoring malfunctions, associated repairs, out of control periods, or required quality assurance or control activities. You must use all the data collected during all other periods in assessing compliance. Any period for which the monitoring system is out-of-control and data are not available for required calculations constitutes a deviation from the monitoring requirements.

(4) Determine the 3-hour block average of all recorded readings, except as provided in paragraph (c)(3) of this section.

(5) Record the results of each inspection, calibration, and validation check.

(d) If you have an operating limit that requires the use of a flow measurement device, you must meet the requirements in paragraphs (c) and (d)(1) through (4) of this section.

(1) Locate the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) Use a flow sensor with a measurement sensitivity of 2 percent of the flow rate.

(3) Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) Conduct a flow sensor calibration check at least semiannually.

(e) If you have an operating limit that requires the use of a pressure measurement device, you must meet the requirements in paragraphs (c) and (e)(1) through (6) of this section.

(1) Locate the pressure sensor(s) in a position that provides a representative measurement of the pressure.

(2) Minimize or eliminate pulsating pressure, vibration, and internal and

external corrosion.

(3) Use a gauge with a minimum tolerance of 1.27 centimeters of water or a transducer with a minimum tolerance of 1 percent of the pressure range.

(4) Check pressure tap pluggage daily.

(5) Using a manometer, check gauge calibration quarterly and transducer calibration monthly.

(6) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

(f) If you have an operating limit that requires the use of a pH measurement device, you must meet the requirements in paragraphs (c) and (f)(1) through (3) of this section.

(1) Locate the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

(2) Ensure the sample is properly mixed and representative of the fluid to be measured.

(3) Check the pH meter's calibration on at least two points every 8 hours of process operation.

(g) If you have an operating limit that requires the use of equipment to monitor voltage and secondary current (or total power input) of an electrostatic precipitator (ESP), you must use voltage and secondary current monitoring equipment to measure voltage and secondary current to the ESP.

(h) If you have an operating limit that requires the use of equipment to monitor sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (c) and (h)(1) through (3) of this section.

(1) Locate the device in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Install and calibrate the device in accordance with manufacturer's

procedures and specifications.

(3) At least annually, calibrate the device in accordance with the manufacturer's procedures and specifications.

(i) If you elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs (i)(1) through (8) of this section.

(1) You must install and operate a bag leak detection system for each exhaust stack of the fabric filter.

(2) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations and in accordance with the guidance provided in EPA-454/R-98-015, September 1997.

(3) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings.

(5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.

(6) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.

(7) For positive pressure fabric filter systems that do not duct all compartments of cells to a common stack, a bag leak detection system must be installed in each baghouse compartment or cell.

(8) Where multiple bag leak detectors are required, the system's instrumentation and alarm may be shared among detectors.

q. <u>§63.7530 How do I demonstrate initial compliance with the emission limits and work</u>

practice standards?

(a) You must demonstrate initial compliance with each emission limit and work practice standard that applies to you by either conducting initial performance tests and establishing operating limits, as applicable, according to §63.7520, paragraph (c) of this section, and Tables 5, 7 and 8 to this subpart OR conducting initial fuel analyses to determine emission rates and establishing operating limits, as applicable, according to §63.7521, paragraph (d) of this section, and Tables 6 and 8 to this subpart.

(b) New or reconstructed boilers or process heaters in one of the liquid fuel subcategories that burn only fossil fuels and other gases and do not burn any residual oil must demonstrate compliance according to §63.7506(a).

(c) If you demonstrate compliance through performance testing, you must establish each site-specific operating limit in Tables 2 through 4 to this subpart that applies to you according to the requirements in §63.7520, Table 7 to this subpart, and paragraph (c)(4) of this section, as applicable. You must also conduct fuel analyses according to §63.7521 and establish maximum fuel pollutant input levels according to paragraphs (c)(1) through (3) of this section, as applicable.

(1) You must establish the maximum chlorine fuel input (Cl_{input}) during the initial performance testing according to the procedures in paragraphs (c)(1)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of chlorine.

(ii) During the performance testing for HCl, you must determine the fraction of the total heat input for each fuel type burned (Q_i) based on the fuel mixture that has the highest content of chlorine, and the average chlorine concentration of each fuel type burned $©_i$).

(iii) You must establish a maximum chlorine input level using Equation 5 of this section.

$$Cl_{input} = \sum_{i=1}^{n} \left[(C_i)(Q_i) \right]$$

(Eq. 5)

where:

Cl_{input} = Maximum amount of chlorine entering the boiler or process heater through fuels burned in units of pounds per million Btu.

C_i = Arithmetic average concentration of chlorine in fuel type, i, analyzed according to

$$TSM_{input} = \sum_{i=1}^{n} \left[(M_i)(Q_i) \right]$$

.7521, in units of pounds per million Btu

Q_i = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

(2) If you choose to comply with the alternative TSM emission limit instead of the particulate matter emission limit, you must establish the maximum TSM fuel input level (TSM_{input}) during the initial performance testing according to the procedures in paragraphs (c)(2)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of TSM.

(ii) During the performance testing for TSM, you must determine the fraction of total heat input from each fuel burned (Qi) based on the fuel mixture that has the highest content of total selected metals, and the average TSM concentration of each fuel type burned (Mi).

(iii) You must establish a baseline TSM input level using Equation 6 of this section.

(Eq. 6)

where:

TSM_{input} = Maximum amount of TSM entering the boiler or process heater through fuels burned in units of pounds per million Btu;

M_i = Arithmetic average concentration of TSM in fuel type, i, analyzed according to §63.7521, in units of pound per million Btu;

Q_i = Fraction of total heat input from based fuel type, i, based on the fuel mixture that has the highest content of TSM. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of "1" for Q_i;

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(3) You must establish the maximum mercury fuel input level ($Mercury_{input}$) during the initial performance testing using the procedures in paragraphs (c)(3)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of mercury.

(ii) During the compliance demonstration for mercury, you must determine the fraction of total heat input for each fuel burned (Q_i) based on the fuel mixture that has the highest content of mercury, and the average mercury concentration of each fuel type burned (HG_i).

(iii) You must establish a maximum mercury input level using Equation 7 of this section.

(Eq. 7)

$$Mercury_{input} = \sum_{i=1}^{n} \left[(HG_i)(Q_i) \right]$$

where:

$Mercury_{input}$ = Maximum amount of mercury entering the

boiler or process heater through fuels burned in units of pounds per million Btu;

HG_i	=	Arithmetic average concentration of mercury in fuel type, i, analyzed according to §63.7521, in units of pound per million Btu;
Q_i	=	Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of "1" for Q_i;
n	=	Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of mercury.

(4) You must establish parameter operating limits according to paragraphs (c)(4)(i) through (iv) of this section.

(i) For a wet scrubber, you must establish the minimum scrubber effluent pH, liquid flowrate, and pressure drop as defined in §63.7575, as your operating limits during the three-run performance test. If you use a wet scrubber and you conduct separate performance tests for particulate matter, HCl, and mercury emissions, you must establish one set of minimum scrubber effluent pH, liquid flowrate, and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flowrate and pressure drop operating limits at the highest minimum values established during the performance tests.

(ii) For an electrostatic precipitator, you must establish the minimum voltage and secondary current (or total power input), as defined in §63.7575, as your operating limits during the three-run performance test.

(iii) For a dry scrubber, you must establish the minimum sorbent injection rate, as defined in §63.7575, as your operating limit during the three-run performance test.

(iv) The operating limit for boilers or process heaters with fabric filters that choose to demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in §63.7525, and that each fabric filter must be operated such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period.

(d) If you elect to demonstrate compliance with an applicable emission limit through fuel analysis, you must conduct fuel analyses according to §63.7521 and follow the procedures in paragraphs (d)(1) through (5) of this section.

(1) If you burn more than one fuel type, you must determine the fuel mixture you could burn in your boiler or process heater that would result in the maximum emission rates of the pollutants that you elect to demonstrate compliance through fuel analysis.

(2) You must determine the 90th percentile confidence level fuel pollutant concentration of the composite samples analyzed for each fuel type using

the one-sided z-statistic test described in Equation 8 of this section.

P_{90} = mean + (SD * t) ***(Eq. 8)***

where:

P_{90}	=	90th percentile confidence level pollutant concentration, in pounds per million Btu;
mean	=	Arithmetic average of the fuel pollutant concentration in the fuel samples analyzed according to §63.7521, in units of pounds per million Btu;
SD	=	Standard deviation of the pollutant concentration in the fuel samples analyzed according to §63.7521, in units of pounds per million Btu;
t	=	t distribution critical value for 90th percentile (0.1) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a Distribution Critical Value Table.

$$HCl = \sum_{i=1}^{n} \left[(C_{i90})(Q_i)(1.028) \right]$$

(3) To demonstrate compliance with the applicable emission limit for HCl, the HCl emission rate that you calculate for your boiler or process heater using Equation 9 of this section must be less than the applicable emission limit for Hcl.

(Eq. 9)

where:

HCl	=	HCl emission rate from the boiler or process heater in units of pounds per million Btu;
C_{i90}	=	90th percentile confidence level concentration of chlorine in fuel type, i, in units of pounds per million Btu as calculated according to Equation 8 of this section;
Q_i	=	Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Q_i;
n	=	Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine;
1.028	=	Molecular weight ratio of HCl to chlorine.

(4) To demonstrate compliance with the applicable emission limit for TSM, the TSM emission rate that you calculate for your boiler or process heater using Equation 10 of this section must be less than the applicable emission limit for TSM.

(Eq. 10)

where:

$$Mercury = \sum_{i=1}^{n} \left[(HG_{i90})(Q_i) \right]$$

TSM = TSM emission rate from the boiler or process heater in units of pounds per million Btu;

M_{i90} = 90th percentile confidence level concentration of TSM in fuel, i, in units of pound per million Btu as calculated according to Equation 8 of this section;

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of total selected metals. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Q_i;

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(5) To demonstrate compliance with the applicable emission limit for mercury, the mercury emission rate that you calculate for your boiler or process heater using Equation 11 of this section must be less than the applicable emission limit for mercury.

(Eq. 11)

Mercury = Mercury emission rate from the boiler or process heater in units of pounds per million Btu;

HG_{i90} = 90th percentile confidence level concentration of

		mercury in fuel, i, in units of pound per million Btu as calculated according to Equation 8 of this section;
Qi	=	Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Q_i;
n	=	Number of different fuel types burned in your boiler or process heater for the mixture that has the highest mercury content.

(e) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.7545(e).

Continuous Compliance Requirements

r. <u>§63.7535 How do I monitor and collect data to demonstrate continuous compliance?</u>

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by §63.7505(d).

(b) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) at all times that the affected source is operating.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, or required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system. Boilers and process heaters that have an applicable carbon monoxide work practice standard and are required to install and operate a CEMS, may not use data recorded during periods when the boiler or process heater is operating at less than 50 percent of its rated capacity.

s. <u>§63.7540 How do I demonstrate continuous compliance with the emission limits and work practice standards?</u>

(a) You must demonstrate continuous compliance with each emission limit, operating limit, and work practice standard in Tables 1 through 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (10) of this section.

(1) Following the date on which the initial performance test is completed or is required to be completed under §§63.7 and 63.7510, whichever date comes first, you must not operate above any of the applicable maximum operating

limits or below any of the applicable minimum operating limits listed in Tables 2 through 4 to this subpart at all times except during periods of startup, shutdown and malfunction. Operating limits do not apply during performance tests. Operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits.

(2) You must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would either result in lower emissions of TSM, HCl, and mercury, than the applicable emission limit for each pollutant (if you demonstrate compliance through fuel analysis), or result in lower fuel input of TSM, chlorine, and mercury than the maximum values calculated during the last performance tests (if you demonstrate compliance through performance testing).

(3) If you demonstrate compliance with an applicable HCl emission limit through fuel analysis and you plan to burn a new type of fuel, you must recalculate the HCl emission rate using Equation 5 of §63.7530 according to paragraphs (a)(3)(i) through (iii) of this section.

(i) You must determine the chlorine concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of chlorine.

(iii) Recalculate the HCl emission rate from your boiler or process heater under these new conditions using Equation 5 of §63.7530. The recalculated HCl emission rate must be less than the applicable emission limit.

(4) If you demonstrate compliance with an applicable HCl emission limit through performance testing and you plan to burn a new type of fuel type or a new mixture of fuels, you must recalculate the maximum chlorine input using Equation 1 of §63.7530. If the results of recalculating the maximum chlorine input using Equation 1 of §63.7530 are higher than the maximum chlorine input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the

new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the HCl emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(c).

(5) If you demonstrate compliance with an applicable TSM emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the TSM emission rate using Equation 6 of §63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section.

(i) You must determine the TSM concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of TSM.

(iii) Recalculate the TSM emission rate from your boiler or process heater under these new conditions using Equation 6 of §63.7530. The recalculated TSM emission rate must be less than the applicable emission limit.

(6) If you demonstrate compliance with an applicable TSM emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum TSM input using Equation 2 of §63.7530. If the results of recalculating the maximum total selected metals input using Equation 2 of §63.7530 are higher than the maximum TSM input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the TSM emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(c).

(7) If you demonstrate compliance with an applicable mercury emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the mercury emission rate using Equation 7 of §63.7530 according to the procedures specified in paragraphs (a)(7)(i) through (iii) of this section.

(i) You must determine the mercury concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of mercury.

(iii) Recalculate the mercury emission rate from your boiler or process heater under these new conditions using Equation 7 of §63.7530. The recalculated mercury emission rate must be less than the applicable emission limit.

(8) If you demonstrate compliance with an applicable mercury emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum mercury input using Equation 3 of §63.7530. If the results of recalculating the maximum mercury input using Equation 3 of §63.7530 are higher than the maximum mercury input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the mercury emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(c).

(9) If your unit is controlled with a fabric filter, and you demonstrate continuous compliance using a bag leak detection system, you must initiate corrective action within 1 hour of a bag leak detection system alarm and complete corrective actions according to your SSMP, and operate and maintain the fabric filter system such that the alarm does not sound more than 5 percent of the operating time during a 6-month period. You must also keep records of the date, time, and duration of each alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of the operating time during each 6-month period that the alarm sounds. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken to initiate corrective action.

(10) If you have an applicable work practice standard for carbon monoxide, and you are required to install a CEMS according to §63.7525(a), then you must meet the requirements in paragraphs (a)(10)(i) through (iii) of this

section.

(i) You must continuously monitor carbon monoxide according to §§63.7525(a) and 63.7535.

(ii) Maintain a carbon monoxide emission level below your applicable carbon monoxide work practice standard in Table 1 to this subpart at all times except during periods of startup, shutdown, malfunction, and when your boiler or process heater is operating at less than 50 percent of rated capacity.

(iii) Keep records of carbon monoxide levels according to §63.7555(b).

(b) You must report each instance in which you did not meet each emission limit, operating limit, and work practice standard in Tables 1 through 4 to this subpart that apply to you. You must also report each instance during a startup, shutdown, or malfunction when you did not meet each applicable emission limit, operating limit, and work practice standard. These instances are deviations from the emission limits and work practice standards in this subpart. These deviations must be reported according to the requirements in §63.7550.

(c) During periods of startup, shutdown, and malfunction, you must operate in accordance with the SSMP as required in §63.7505(e).

(d) Consistent with §§63.6(e)and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the EPA Administrator's satisfaction that you were operating in accordance with your SSMP. The EPA Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in §63.6(e).

t. <u>§63.7541 How do I demonstrate continuous compliance under the emission averaging provision?</u>

(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of paragraphs (a)(1) through (4) of this section.

(1) For each calendar month, demonstrate compliance with the average weighted emissions limit for the existing large solid fuel boilers participating in the emissions averaging option as determined in §63.7522(f) and (g);

(2) For each existing solid fuel boiler participating in the emissions averaging option that is equipped with a dry control system, maintain opacity at or below the applicable limit;

(3) For each existing solid fuel boiler participating in the emissions averaging option that is equipped with a wet scrubber, maintain the 3-hour average parameter values at or below the operating limits established during the most recent performance test; and

(4) For each existing solid fuel boiler participating in the emissions averaging option that has an approved alternative operating plan, maintain the 3-hour average parameter values at or below the operating limits established in the most recent performance test.

(b) Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (4) of this section, except during periods of startup, shutdown, and malfunction, is a deviation.

Notification, Reports, and Records

u. §63.7545 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8 (e), (f)(4) and (6), and 63.9 (b) through (h) that apply to you by the dates specified.

(b) As specified in §63.9(b)(2), if you startup your affected source before September 13, 2004, you must submit an Initial Notification not later than 120 days after September 13, 2004. The Initial Notification must include the information required in paragraphs (b)(1) and (2) of this section, as applicable.

(1) If your affected source has an annual capacity factor of greater than 10 percent, your Initial Notification must include the information required by §63.9(b)(2).

(2) If your affected source has a federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent such that the unit is in one of the limited use subcategories (the limited use solid fuel subcategory, the limited use liquid fuel subcategory, or the limited use gaseous fuel subcategory), your Initial Notification must include the information required by §63.9(b)(2) and also a signed statement indicating your affected source has a federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent.

(c) As specified in §63.9(b)(3), if you startup your new or reconstructed affected source on or after September 13, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart. The Initial Notification must include the information required in paragraphs (c)(1) and (2) of this section, as applicable.

(1) If your affected source has an annual capacity factor of greater than 10 percent, your Initial Notification must include the information required by §63.9(b).

(2) If your affected source has a federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent such that the unit is in one of the limited use subcategories, your Initial Notification must include the information required by §63.9(b) and a signed statement indicating your affected source has a federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent.

(d) If you are required to conduct a performance test you must submit a Notification of Intent to conduct a performance test at least 30 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(e) If you are required to conduct an initial compliance demonstration as specified in §63.7530(a), you must submit a Notification of Compliance Status according to

§63.9(h)(2)(ii). For each initial compliance demonstration, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of the performance test and/or other initial compliance demonstrations according to §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(l) through (9), as applicable.

(1) A description of the affected source(s) including identification of which subcategory the source is in, the capacity of the source, a description of the add-on controls used on the source description of the fuel(s) burned, and justification for the fuel(s) burned during the performance test.

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

(3) Identification of whether you are complying with the particulate matter emission limit or the alternative total selected metals emission limit.

(4) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing or fuel analysis.

(5) Identification of whether you plan to demonstrate compliance by emissions averaging.

(6) A signed certification that you have met all applicable emission limits and work practice standards.

(7) A summary of the carbon monoxide emissions monitoring data and the maximum carbon monoxide emission levels recorded during the performance test to show that you have met any applicable work practice standard in Table 1 to this subpart.

(8) If your new or reconstructed boiler or process heater is in one of the liquid fuel subcategories and burns only liquid fossil fuels other than residual oil either alone or in combination with gaseous fuels, you must submit a signed statement certifying this in your Notification of Compliance Status report.

(9) If you had a deviation from any emission limit or work practice standard, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance

Status report.

v. <u>§63.7550 What reports must I submit and when?</u>

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.7495 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 your source in §63.7495.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.7495.

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

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

(5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you 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.

(c) The compliance report must contain the information required in paragraphs (c)(1) through (11) of this section.

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) The total fuel use by each affected source subject to an emission limit, for each calendar month within the semiannual reporting period, including, but not limited to, a description of the fuel and the total fuel usage amount with units of measure.

(5) A summary of the results of the annual performance tests and documentation of any operating limits that were reestablished during this test, if applicable.

(6) A signed statement indicating that you burned no new types of fuel. Or, if you did burn a new type of fuel, you must submit the calculation of chlorine input, using Equation 1 of §63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 5 of §63.7530 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel, you must submit the calculation of TSM input, using Equation 2 of §63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate using Equation 6 of §63.7530 that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel, you must submit the calculation of mercury input, using Equation 3 of §63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 7 of §63.7530 that demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

(7) If you wish to burn a new type of fuel and you can not demonstrate compliance with the maximum chlorine input operating limit using Equation 1 of §63.7530, the maximum TSM input operating limit using

Equation 2 of §63.7530, or the maximum mercury input operating limit using Equation 3 of §63.7530, you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

(8) The hours of operation for each boiler and process heater that is subject to an emission limit for each calendar month within the semiannual reporting period. This requirement applies only to limited use boilers and process heaters.

(9) If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in §63.10(d)(5)(i).

(10) If there are no deviations from any emission limits or operating limits in this subpart that apply to you, and there are no deviations from the requirements for work practice standards in this subpart, a statement that there were no deviations from the emission limits, operating limits, or work practice standards during the reporting period.

(11) If there were no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in §63.8(c)(7), a statement that there were no periods during which the CMSs were out of control during the reporting period.

(d) For each deviation from an emission limit or operating limit in this subpart and for each deviation from the requirements for work practice standards in this subpart that occurs at an affected source where you are not using a CMSs to comply with that emission limit, operating limit, or work practice standard, the compliance report must contain the information in paragraphs (c)(1) through (10) of this section and the information required in paragraphs (d)(1) through (4) of this section. This includes periods of startup, shutdown, and malfunction.

(1) The total operating time of each affected source during the reporting period.

(2) A description of the deviation and which emission limit, operating limit, or work practice standard from which you deviated.

(3) Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

(4) A copy of the test report if the annual performance test showed a deviation from the emission limit for particulate matter or the alternative TSM limit, a deviation from the HCl emission limit, or a deviation from the mercury emission limit.

(e) For each deviation from an emission limitation and operating limit or work practice standard in this subpart occurring at an affected source where you are using a CMS to comply with that emission limit, operating limit, or work practice standard, you must include the information in paragraphs (c)(1) through (10) of this section and the information required in paragraphs (e)(1) through (12) of this section. This includes periods of startup, shutdown, and malfunction and any deviations from your site-specific monitoring plan as required in §63.7505(d).

(1) The date and time that each malfunction started and stopped and description of the nature of the deviation (i.e., what you deviated from).

(2) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out of control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMSs downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

(8) An identification of each parameter that was monitored at the affected source for which there was a deviation, including opacity, carbon monoxide, and operating parameters for wet scrubbers and other control devices.

(9) A brief description of the source for which there was a deviation.

(10) A brief description of each CMS for which there was a deviation.

(11) The date of the latest CMS certification or audit for the system for which there was a deviation.

(12) A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must 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 9 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. However, 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.

(g) If you operate a new gaseous fuel unit that is subject to the work practice standard specified in Table 1 to this subpart, and you intend to use a fuel other than natural gas or equivalent to fire the affected unit, you must submit a notification of alternative fuel use within 48 hours of the declaration of a period of natural gas curtailment or supply interruption, as defined in §63.7575. The notification must include the information specified in paragraphs (g)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.

(4) Type of alternative fuel that you intend to use.

(5) Dates when the alternative fuel use is expected to begin and end.

w. <u>§63.7555 What records must I keep?</u>

(a) You must keep records according to paragraphs (a)(1) through (3) of this section.

(1) A copy of each notification and report that you submitted to comply with

this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).

(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

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

(b) For each CEMS, CPMS, and COMS, you must keep records according to paragraphs (b)(1) through (5) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Monitoring data for continuous opacity monitoring system during a performance evaluation as required in §63.6(h)(7)(i) and (ii).

(3) Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

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

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

(c) You must keep the records required in Table 8 to this subpart including records of all monitoring data and calculated averages for applicable operating limits such as opacity, pressure drop, carbon monoxide, and pH to show continuous compliance with each emission limit, operating limit, and work practice standard that applies to you.

(d) For each boiler or process heater subject to an emission limit, you must also keep the records in paragraphs (d)(1) through (5) of this section.

(1) You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.

(2) You must keep records of monthly hours of operation by each boiler or process heater. This requirement applies only to limited-use boilers and process heaters.

(3) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 1 of §63.7530, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 5 of §63.7530, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.

(4) A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 2 of §63.7530, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 6 of §63.7530, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.

(5) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 3 of §63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 7 of §63.7530, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.

(e) If your boiler or process heater is subject to an emission limit or work practice standard in Table 1 to this subpart and has a federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent such that the unit is in one of the limited use subcategories, you must keep the records in paragraphs (e)(1) and (2) of this section.

(1) A copy of the federally enforceable permit that limits the annual capacity factor of the source to less than or equal to 10 percent.

(2) Fuel use records for the days the boiler or process heater was operating.

x. <u>§63.7560 In what form and how long must I keep my records?</u>

(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must 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). You can keep the records off site for the remaining 3 years.

Other Requirements and Information

y. <u>§63.7565 What parts of the General Provisions apply to me?</u>

Table 10 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

z. <u>§63.7570 Who implements and enforces this subpart?</u>

(a) This subpart can be implemented and enforced by U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities listed in paragraphs (b)(1) through (5) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency, however, the U.S. EPA retains oversight of this subpart and can take enforcement actions, as appropriate.

(1) Approval of alternatives to the non-opacity emission limits and work practice standards in §63.7500(a) through (c) under §63.6(g).

(2) Approval of alternative opacity emission limits in §63.7500(a) under §63.6(h)(9).

(3) Approval of major change to test methods in Table 5 to this subpart under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(4) Approval of major change to monitoring under §63.8(f) and as defined in §63.90.

(5) Approval of major change to record keeping and reporting under §63.10(f) and as defined in §63.90.

aa. <u>§63.7575 What definitions apply to this subpart?</u>

Terms used in this subpart are defined in the CAA, in §63.2 (the General Provisions), and in this section as follows:

<u>Annual capacity factor</u> means the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year, and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

<u>Bag leak detection system</u> means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

<u>Biomass fuel</u> means unadulterated wood as defined in this subpart, wood residue, and wood products (e.g., trees, tree stumps, tree limbs, bark, lumber, sawdust, sanderdust, chips, scraps, slabs, millings, and shavings); animal litter; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds.

<u>Blast furnace gas fuel-fired boiler or process heater</u> means an

industrial/commercial/institutional boiler or process heater that receives 90 percent or more of its total heat input (based on an annual average) from blast furnace gas.

Boiler means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Waste heat boilers are excluded from this definition.

Coal means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by the American Society for Testing and Materials in ASTM D388-99e1, "Standard Specification for Classification of Coals by Rank," coal refuse, and petroleum coke. Synthetic fuels derived from coal for the purpose of creating useful heat including but not limited to, solvent-refined coal, coal-oil mixtures, and coal-water mixtures, for the purposes of this subpart. Coal derived gases are excluded from this definition.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (6,000 Btu per pound) on a dry basis.

Commercial/institutional boiler means a boiler used in commercial establishments or institutional establishments such as medical centers, research centers, institutions of higher education, hotels, and laundries to provide electricity, steam, and/or hot water.

Construction/demolition material means waste building material that result from the construction or demolition operations on houses and commercial and industrial buildings.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limit, operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless or whether or not such failure is permitted by this subpart.

A deviation is not always a violation. The determination of whether a deviation constitutes a violation of the standard is up to the discretion of the entity responsible for

enforcement of the standards.

Distillate oil means fuel oils, including recycled oils, that comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D396-02a, "Standard Specifications for Fuel Oils."

Dry scrubber means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems in fluidized bed boilers and process heaters are included in this definition.

Electric utility steam generating unit means a fossil fuel-fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electrical output to any utility power distribution system for sale is considered an electric utility steam generating unit.

Electrostatic precipitator means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper.

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse.

Federally enforceable means all limitations and conditions that are enforceable by the EPA Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Firetube boiler means a boiler in which hot gases of combustion pass through the tubes and water contacts the outside surfaces of the tubes.

Fuel type means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, subbituminous coal, lignite, anthracite, biomass, construction/demolition material, salt water laden wood, creosote treated wood, tires, residual oil. Individual fuel types received from different suppliers are not considered new fuel types except for construction/demolition material.

Fossil fuel means natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such materials.

Gaseous fuel includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, and biogas. Blast furnace gas is exempted from this definition.

Heat input means heat derived from combustion of fuel in a boiler or process heater and does not include the heat input from preheated combustion air, recirculated flue gases, or

exhaust gases from other sources such as gas turbines, internal combustion engines, kilns, etc.

Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous or liquid fuel and is withdrawn for use external to the vessel at pressures not exceeding 160 psig, including the apparatus by which the heat is generated and all controls and devices necessary to prevent water temperatures from exceeding 210°F (99°C).

Industrial boiler means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

Large gaseous fuel subcategory includes any watertube boiler or process heater that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment or gas supply emergencies, has a rated capacity of greater than 10 MMBtu per hour heat input, and has an annual capacity factor of greater than 10 percent.

Large liquid fuel subcategory includes any watertube boiler or process heater that does not burn any solid fuel and burns any liquid fuel either alone or in combination with gaseous fuels, has a rated capacity of greater than 10 MMBtu per hour heat input, and has an annual capacity factor of greater than 10 percent. Large gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply emergencies are not included in this definition.

Large solid fuel subcategory includes any watertube boiler or process heater that burns any amount of solid fuel either alone or in combination with liquid or gaseous fuels, has a rated capacity of greater than 10 MMBtu per hour heat input, and has an annual capacity factor of greater than 10 percent.

Liquid fossil fuel means petroleum, distillate oil, residual oil and any form of liquid fuel derived from such material.

Liquid fuel includes, but is not limited to, distillate oil, residual oil, waste oil, and process liquids.

Limited use gaseous fuel subcategory includes any watertube boiler or process heater that burns gaseous fuels not combined with any liquid or solid fuels, burns liquid fuel only during periods of gas curtailment or gas supply emergencies, has a rated capacity of greater than 10 MMBtu per hour heat input, and has a federally enforceable annual average capacity factor of equal to or less than 10 percent.

Limited use liquid fuel subcategory includes any watertube boiler or process heater that does not burn any solid fuel and burns any liquid fuel either alone or in combination with gaseous fuels, has a rated capacity of greater than 10 MMBtu per hour heat input, and has a federally enforceable annual average capacity factor of equal to or less than 10 percent. Limited use gaseous fuel boilers and process heaters that burn liquid fuel during periods of

gas curtailment or gas supply emergencies are not included in this definition.

Limited use solid fuel subcategory includes any watertube boiler or process heater that burns any amount of solid fuel either alone or in combination with liquid or gaseous fuels, has a rated capacity of greater than 10 MMBtu per hour heat input, and has a federally enforceable annual average capacity factor of equal to or less than 10 percent.

Minimum pressure drop means 90 percent of the lowest test-run average pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum scrubber effluent pH means 90 percent of the lowest test-run average effluent pH measured at the outlet of the wet scrubber according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable hydrogen chloride emission limit.

Minimum scrubber flow rate means 90 percent of the lowest test-run average flow rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum sorbent flow rate means 90 percent of the lowest test-run average sorbent (or activated carbon) flow rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.

Minimum voltage or amperage means 90 percent of the lowest test-run average voltage or amperage to the electrostatic precipitator measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquid petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835-03a, "Standard Specification for Liquid Petroleum Gases."

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Particulate matter means any finely divided solid or liquid material, other than uncombined water, as measured by the test methods specified under this subpart, or an alternative method.

Period of natural gas curtailment or supply interruption means a period of time during which the supply of natural gas to an affected facility is halted for reasons beyond the control of the facility. An increase in the cost or unit price of natural gas does not constitute a period of natural gas curtailment or supply interruption.

Process heater means an enclosed device using controlled flame, that is not a boiler, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not directly come into contact with process materials. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves.

Residual oil means crude oil, and all fuel oil numbers 4, 5 and 6, as defined by the American Society for Testing and Materials in ASTM D396-02a, "Standard Specifications for Fuel Oils."

Responsible official means responsible official as defined in 40 CFR 70.2.

Small gaseous fuel subcategory includes any firetube boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment or gas supply emergencies, and any boiler or process heater that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment or gas supply emergencies, and has a rated capacity of less than or equal to 10 MMBtu per hour heat input.

Small liquid fuel subcategory includes any firetube boiler that does not burn any solid fuel and burns any liquid fuel either alone or in combination with gaseous fuels, and any boiler or process heater that does not burn any solid fuel and burns any liquid fuel either alone or in combination with gaseous fuels, and has a rated capacity of less than or equal to 10 MMBtu per hour heat input. Small gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply emergencies are not included in this definition.

Small solid fuel subcategory includes any firetube boiler that burns any amount of solid fuel either alone or in combination with liquid or gaseous fuels, and any other boiler or process heater that burns any amount of solid fuel either alone or in combination with liquid or gaseous fuels and has a rated capacity of less than or equal to 10 MMBtu per hour heat input.

Solid fuel includes, but is not limited to, coal, wood, biomass, tires, plastics, and other nonfossil solid materials.

Temporary boiler means any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another. A temporary boiler that remains at a location for more than 180 consecutive days is no longer considered to be a temporary boiler. Any temporary boiler that replaces a temporary boiler at a location and is intended to perform the same or similar function will be included in calculating the consecutive time period.

Total selected metals means the combination of the following metallic HAP: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.

Unadulterated wood means wood or wood products that have not been painted, pigment-stained, or pressure treated with compounds such as chromate copper arsenate, pentachlorophenol, and creosote. Plywood, particle board, oriented strand board, and other types of wood products bound by glues and resins are included in this definition.

Watertube boiler means a boiler in which water passes through the tubes and hot gases of combustion pass over the outside surfaces of the tubes.

Waste heat boiler means a device that recovers normally unused energy and converts it to usable heat. Waste heat boilers incorporating duct or supplemental burners that are designed to supply 50 percent or more of the total rated heat input capacity of the waste heat boiler are not considered waste heat boilers, but are considered boilers. Waste heat boilers are also referred to as heat recovery steam generators.

Wet scrubber means any add-on air pollution control device that mixes an aqueous stream or slurry with the exhaust gases from a boiler or process heater to control emissions of particulate matter and/or to absorb and neutralize acid gases, such as hydrogen chloride.

Work practice standard means any design, equipment, work practice, or operational standard,

or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

Tables to Subpart DDDDD of Part 63

Table 1 to Subpart DDDDD of Part 63 — Emission Limits and Work Practice Standards

As stated in §63.7500, you must comply with the following applicable emission limits:

If your boiler or process heater is in this subcategory...	For the following pollutants...	You must meet the following emission limits and work practice standards...
1. New or reconstructed large solid fuel	a. Particulate Matter (OR Total Selected Metals)	0.025 lb per MMBtu of heat input; or (0.0003 lb per MMBtu/hr of heat input)
	b. Hydrogen Chloride	0.02 lb per MMBtu of heat input
	c. Mercury	0.000003 lb per MMBtu of heat input
	d. Carbon Monoxide	400 ppm by volume on a dry basis corrected to 7 percent oxygen (30-day rolling average for units 100 MMBtu/hr or greater, 3-run average for units less than 100 MMBtu/hr)
2. New or reconstructed limited use solid fuel	a. Particulate Matter (OR Total Selected Metals)	0.025 lb per MMBtu of heat input; or (0.0003 lb per MMBtu/hr of heat input)
	b. Hydrogen Chloride	0.02 lb per MMBtu of heat input
	c. Mercury	0.000003 lb per MMBtu of heat input
	d. Carbon Monoxide	400 ppm by volume on a dry basis corrected to 7 percent oxygen (3-run average)
3. New or reconstructed small solid fuel	a. Particulate Matter (OR Total Selected Metals)	0.025 lb per MMBtu of heat input; or (0.0003 lb per MMBtu/hr of heat input)
	b. Hydrogen Chloride	0.02 lb per MMBtu of heat input
	c. Mercury	0.000003 lb per MMBtu of heat input

4. New or reconstructed large liquid fuel	a. Particulate Matter b. Hydrogen Chloride c. Carbon Monoxide	0.03 lb per MMBtu of heat input 0.0005 lb per MMBtu of heat input 400 ppm by volume on a dry basis corrected to 3 percent oxygen (30-day rolling average for units 100 MMBtu/hr or greater, 3-run average for units less than 100 MMBtu/hr)
5. New or reconstructed limited use liquid fuel	a. Particulate Matter b. Hydrogen Chloride c. Carbon Monoxide	0.03 lb per MMBtu of heat input 0.0009 lb per MMBtu of heat input 400 ppm by volume on a dry basis corrected to 3 percent oxygen (3-run average)
6. New or reconstructed small liquid fuel	a. Particulate Matter b. Hydrogen Chloride	0.03 lb per MMBtu of heat input 0.0009 lb per MMBtu of heat input
7. New or reconstructed large gaseous fuel	Carbon Monoxide	400 ppm by volume on a dry basis corrected to 3 percent oxygen (30-day rolling average for units 100 MMBtu/hr or greater, 3-run average for units less than 100 MMBtu/hr)
8. New or reconstructed limited use gaseous fuel	Carbon Monoxide	400 ppm by volume on a dry basis corrected to 3 percent oxygen (3-run average)
9. Existing large solid fuel	a. Particulate Matter (OR Total Selected Metals) b. Hydrogen Chloride c. Mercury	0.07 lb per MMBtu of heat input (0.001 lb per MMBtu/hr of heat input) 0.09 lb per MMBtu of heat input 0.000009 lb per MMBtu of heat input
10. Existing limited use solid fuel	Particulate Matter (OR Total Selected Metals)	0.21 lb per MMBtu of heat input (0.004 lb per MMBtu/hr of heat input)

Table 2 to Subpart DDDDD of Part 63 — Operating Limits for Boilers and Process Heaters with Particulate Matter Emission Limits

As stated in §63.7500, you must comply with the applicable operating limits:

If you demonstrate compliance with applicable particulate matter emission limits using...	**You must meet these operating limits...**
1. Wet scrubber control	a. Maintain the minimum pressure drop and liquid flow-rate at or above the operating levels established during the performance test according to §63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limit for particulate matter.
2. Fabric filter control	a. Install and operate a bag leak detection system according to §63.7525 and operate the fabric filter such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during each 6-month period; OR b. This option is for boilers and process heaters that operate dry control systems. Existing boilers and process heaters must maintain opacity to less than or equal to 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent. New boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity (1-hour block average).
3. Electrostatic precipitator control	a. This option is for boilers and process heaters that operate dry control systems. Existing boilers and process heaters must maintain opacity to less than or equal to 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent. New boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity (1-hour block average).; OR b. This option is only for boilers and process heaters that operate additional wet control systems. Maintain the minimum voltage and secondary current or total power input of the electrostatic precipitator at or above the operating limits established during the performance test according to §63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limit for particulate matter.

4. Any other control type	This option is for boilers and process heaters that operate dry control systems. Existing boilers and process heaters must maintain opacity to less than or equal to 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent. New boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity (1-hour block average).

Table 3 to Subpart DDDDD of Part 63 — Operating Limits for Boilers and Process Heaters With Mercury Emission Limits and Boilers and Process Heaters That Choose to Comply With the Alternative Total Selected Metals Emission Limits

As stated in §63.7500, you must comply with the applicable operating limits:

If you demonstrate compliance with applicable mercury and/or total selected metals emission limits using...	You must meet these operating limits...
1. Wet scrubber control	**Maintain the minimum pressure drop and liquid flow-rate at or above the operating levels established during the performance test according to §63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limits for mercury and/or total selected metals.**
2. Fabric filter control	**a. Install and operate a bag leak detection system according to §63.7525 and operate the fabric filter such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period; OR** **b. This option is for boilers and process heaters that operate dry control systems. Existing sources must maintain opacity to less than or equal to 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent. New sources must maintain opacity to less than or equal to 10 percent opacity (1-hour block average).**

3. Electrostatic precipitator control	**a. This option is for boilers and process heaters that operate dry control systems. Existing sources must maintain opacity to less than or equal to 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent. New sources must maintain opacity to less than or equal to 10 percent opacity (1-hour block average); OR** **b. This option is only for boilers and process heaters that operate additional wet control systems. Maintain the minimum voltage and secondary current or total power input of the electrostatic precipitator at or above the operating limits established during the performance test according to §63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limits for mercury and/or total selected metals.**
4. Dry scrubber or carbon injection control	**Maintain the minimum sorbent or carbon injection rate at or above the operating levels established during the performance test according to §63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limit for mercury.**
5. Any other control type	**This option is only for boilers and process heaters that operate dry control systems. Existing sources must maintain opacity to less than or equal to 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent. New sources must maintain opacity to less than or equal to 10 percent opacity (1-hour block average).**
6. Fuel analysis	**Maintain the fuel type or fuel mixture such that the mercury and/or total selected metals emission rates calculated according to §63.7530(d)(4) and/or (5) is less than the applicable emission limits for mercury and/or total selected metals.**

Table 4 to Subpart DDDDD of Part 63 — Operating Limits for Boilers and Process Heaters with Hydrogen Chloride Emission Limits

As stated in §63.7500, you must comply with the following applicable operating limits:

If you demonstrate compliance with applicable hydrogen chloride emission limits using...	You must meet these operating limits...
1. Wet scrubber control	Maintain the minimum scrubber effluent pH, pressure drop, and liquid flow-rate at or above the operating levels established during the performance test according to §63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limit for hydrogen chloride.
2. Dry scrubber control	Maintain the minimum sorbent injection rate at or above the operating levels established during the performance test according to §63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limit for hydrogen chloride.
3. Fuel analysis	Maintain the fuel type or fuel mixture such that the hydrogen chloride emission rate calculated according to §63.7530(d)(3) is less than the applicable emission limit for hydrogen chloride.

Table 5 to Subpart DDDDD of Part 63 — Performance Testing Requirements

As stated in §63.7520, you must comply with the following requirements for performance test for existing, new or reconstructed affected sources:

To conduct a performance test for the following pollutant...	You must...	Using...

1. Particulate Matter	a. Select sampling ports location and the number of traverse points.	Method 1 in appendix A to part 60 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas.	Method 2, 2F, or 2G in appendix A to part 60 of this chapter.
	c. Determine oxygen and carbon dioxide concentrations of the stack gas.	Method 3A or 3B in appendix A to part 60 of this chapter or ASME PTC 19, Part 10(1981).
	d. Measure the moisture content of the stack gas	Method 4 in appendix A to part 60 of this chapter.
	e. Measure the particulate matter emission concentration	Method 5 or 17 (positive pressure fabric filters must use Method 5D) in appendix A to part 60 of this chapter.
	f. Convert emissions concentration to lb per MMBtu emission rates.	Method 19 F-factor methodology in appendix A to part 60 of this chapter.

2. Total selected metals	a. Select sampling ports location and the number of traverse points.	Method 1 in appendix A to part 60 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas.	Method 2, 2F, or 2G in appendix A to part 60 of this chapter.
	c. Determine oxygen and carbon dioxide concentrations of the stack gas.	Method 3A or 3B in appendix A to part 60 of this chapter or ASME PTC 19, Part 10(1981).
	d. Measure the moisture content of the stack gas	Method 4 in appendix A to part 60 of this chapter.
	e. Measure the total selected metals emission concentration	Method 29 in appendix A to part 60 of this chapter.
	f. Convert emissions concentration to lb per MMBtu emission rates.	Method 19 F-factor methodology in appendix A to part 60 of this chapter.
3. Hydrogen chloride	a. Select sampling ports location and the number of traverse points.	Method 1 in appendix A to part 60 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas.	Method 2, 2F, or 2G in appendix A to part 60 of this chapter.
	c. Determine oxygen and carbon dioxide concentrations of the stack gas.	Method 3A or 3B in appendix A to part 60 of this chapter or ASME PTC 19, Part 10(1981).
	d. Measure the moisture content of the stack gas	Method 4 in appendix A to part 60 of this chapter.
	e. Measure the hydrogen chloride emission concentration	Method 26 or 26A in appendix A to part 60 of this chapter.
	f. Convert emissions concentration to lb per MMBtu emission rates.	Method 19 F-factor methodology in appendix A to part 60 of this chapter.

4. Mercury	**a. Select sampling ports location and the number of traverse points.**	**Method 1 in appendix A to part 60 of this chapter.**
	b. Determine velocity and volumetric flow-rate of the stack gas.	**Method 2, 2F, or 2G in appendix A to part 60 of this chapter.**
	c. Determine oxygen and carbon dioxide concentrations of the stack gas.	**Method 3A or 3B in appendix A to part 60 of this chapter or ASME PTC 19, Part 10(1981).**
	d. Measure the moisture content of the stack gas	**Method 4 in appendix A to part 60 of this chapter.**
	e. Measure the mercury emission concentration	**Method 29 in appendix A to part 60 of this chapter or Method 101A in appendix B to part 61 of this chapter or ASTM Method D6784-02.**
	f. Convert emissions concentration to lb per MMBtu emission rates.	**Method 19 F-factor methodology in appendix A to part 60 of this chapter.**

5. Carbon Monoxide	**a. Select the sampling ports location and the number of traverse points.**	**Method 1 in appendix A to part 60 of this chapter.**
	b. Determine velocity and volumetric flow-rate of the stack gas.	**Method 2, 2F, or 2G in appendix A to part 60 of this chapter.**
	c. Determine oxygen and carbon dioxide concentrations of the stack gas.	**Method 3A or 3B in appendix A to part 60 of this chapter or ASME PTC 19, Part 10(1981).**
	d. Measure the moisture content of the stack gas.	**Method 4 in appendix A to part 60 of this chapter.**
	e. Measure the carbon monoxide emission concentration.	**Method 10, 10A, or 10 B in appendix A to part 60 of this chapter.**
	f. Convert emissions concentration to lb per MMBtu emission rates.	**Method 19 F-factor methodology in appendix A to part 60 of this chapter.**

Table 6 to Subpart DDDDD of Part 63 — Fuel Analysis Requirements

As stated in §63.7521, you must comply with the following requirements for fuel analysis testing for existing, new or reconstructed affected sources:

To conduct a fuel analysis for the following pollutant...	You must...	Using...

1. Mercury	a. Collect fuel samples.	Procedure in §63.7521(c) or ASTM D2234M-03 (for coal) or ASTM D6323-98 (2003) (for biomass) or equivalent.
	b. Composite fuel samples.	Procedure in §63.7521(d) or equivalent.
	c. Prepare composited fuel samples.	SW-846-3050B (for solid samples) or SW-846-3020A (for liquid samples) or ASTM D2013-01 (for coal) or ASTM D5198-92 (2003) (for biomass) or equivalent.
	d. Determine heat content of the fuel type.	ASTM D5865-03a (for coal) or ASTM E711-87 (1996) (for biomass) or equivalent.
	e. Determine moisture content of the fuel type.	ASTM D3173-02 or ASTM E871-82 (1998) or equivalent.
	f. Measure mercury concentration in fuel sample.	ASTM D3684-01 (for coal) or SW-846-7471A (for solid samples) or SW-846 7470A (for liquid samples).
	g. Convert concentrations in into units of pounds of pollutant per MMBtu of heat content.	

2. Total selected metals	**a. Collect fuel samples.**	**Procedure in §63.7521(c) or ASTM D2234M-03 (for coal) or ASTM D6323-98 (2003) (for biomass) or equivalent.**
	b. Composite fuel samples.	**Procedure in §63.7521(d) or equivalent.**
	c. Prepare composited fuel samples	**SW-846-3050B (for solid samples) or SW-846-3020A (for liquid samples) or ASTM D2013-01 (for coal) or ASTM D5198-92 (2003)(for biomass) or equivalent.**
	d. Determine heat content of the fuel type.	**ASTM D5865-03a (for coal) or ASTM E 711-87 (for biomass) or equivalent.**
	e. Determine moisture content of the fuel type.	**ASTM D3173-02 or ASTM E871 or equivalent.**
	f. Measure total selected metals concentration in fuel sample.	**SW-846-6010Bor ASTM D3683-94 (2000) (for coal) or ASTM E885-88 (1996) (for biomass).**
	g. Convert concentrations into units of pounds of pollutant per MMBtu of heat content.	

3.Hydrogen chloride	a. Collect fuel samples. b. Composite fuel samples. c. Prepare composited fuel samples d. Determine heat content of the fuel type. e. Determine moisture content of the fuel type. f. Measure chlorine concentration in fuel sample. g. Convert concentrations into units of pounds of pollutant per MMBtu of heat content.	Procedure in §63.7521(c) or ASTM D2234M-03 (for coal) or ASTM D6323-98 (2003) (for biomass) or equivalent. Procedure in §63.7521(d) or equivalent. SW-846-3050B (for solid samples) or SW-846-3020A (for liquid samples) or ASTM D2013-01 (for coal) or ASTM D5198-92 (2003) (for biomass) or equivalent. ASTM D5865-03a (for coal) or ASTME 711-87 (1996) (for biomass) or equivalent. ASTM D3173-02 or ASTM E871-82 (1998) or equivalent. SW-846-9250 or ASTM E776-87 (1996) (for biomass) or equivalent.

Table 7 to Subpart DDDDD of Part 63 — Establishing Operating Limits

As stated in §63.7520, you must comply with the following requirements for establishing operating limits:

If you have an applicable emission limit for...	And your operating limits are based on...	You must...	Using...	According to the following requirements

1. Particulate matter, mercury, or total selected metals.	a. Wet scrubber operating parameters	i. Establish a site-specific minimum pressure drop and minimum flow rate operating limit according to §63.7530(c)	(1) Data from the pressure drop and liquid flow rate monitors and the particulate matter, mercury, or total selected metals performance test.	(a) You must collect pressure drop and liquid flow-rate data every 15 minutes during the entire period of the performance tests; (b) Determine the average pressure drop and liquid flow-rate for each individual test run in the three-run performance test by computing the average of all the 15-minute readings taken during each test run.
	b. Electrostatic precipitator operating parameters (option only for units with additional wet scrubber control)	i. Establish a site-specific minimum voltage and secondary current or total power input according to §63.7530(c)	(1) Data from the pressure drop and liquid flow rate monitors and the particulate matter, mercury, or total selected metals performance test.	(a) You must collect voltage and secondary current or total power input data every 15 minutes during the entire period of the performance tests; (b) Determine the average voltage and secondary current or total power input for each individual test run in the three-run performance test by computing the average of all the 15-minute readings taken during each test run.

	c. A site-specific opacity limit (only for units that meet the criteria for having a site-specific opacity limit according to §63.7530(c)(6)(i)	i. Establish a site-specific maximum opacity operating limit according to §63.7530(c)	(1) Data from the continuous opacity monitoring system and the particulate matter, mercury, or total selected metals performance test.	(a) Collecting the opacity monitoring system data according to §63.7525(b) and §63.7535; and (b) Reducing the opacity monitoring data to 6-minute averages; and (c) Determine the average opacity for each individual test run in the three-run performance test by computing the average of all the 6-minute readings taken during each test run.
2. Hydrogen Chloride	a. Wet scrubber operating parameters	i. Establish a site-specific minimum pressure drop and minimum flow rate operating limit according to §63.7530(c)	(1) Data from the pH, pressure drop, and liquid flow rate monitors and the hydrogen chloride performance test.	(a) You must collect pH, pressure drop, and liquid flow-rate data every 15 minutes during the entire period of the performance tests; (b) Determine the average pH, pressure drop, and liquid flow-rate for each individual test run in the three-run performance test by computing the average of all the 15-minute readings taken during each test run.

	b. Dry scrubber operating parameters	**i. Establish a site-specific minimum sorbent injection rate operating limit according to §63.7530(c)**	**(1) Data from the sorbent injection rate monitors and the hydrogen chloride performance test.**	**(a) You must collect sorbent injection rate data every 15 minutes during the entire period of the performance tests;** **(b) Determine the average sorbent injection rate for each individual test run in the three-run performance test by computing the average of all the 15-minute readings taken during each test run.**

Table 8 to Subpart DDDDD of Part 63 — Demonstrating Continuous Compliance

As stated in §63.7540, you must show continuous compliance with the emission limitations for affected sources according to the following:

If you must meet the following operating limits or work practice standards...	**You must demonstrate continuous compliance by...**
1. Opacity.	**a. Collecting the opacity monitoring system data according to §§63.7525(b) and 63.7535; and** **b. Reducing the opacity monitoring data to 6-minute averages; and** **c. Maintaining opacity to less than or equal to 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent for existing sources; OR maintaining opacity to less than or equal to 10 percent (1-hour block average) for new sources.**
2. Fabric Filter Bag Leak Detection Operation.	**Installing and operating a bag leak detection system according to §63.7525 and operating the fabric filter such that the requirements in §63.7540(a)(9) are met.**
3. Wet Scrubber Pressure Drop and Liquid Flow-rate.	**a. Collecting the pressure drop and liquid flow rate monitoring system data according to §§63.7525 and 63.7535; and** **b. Reducing the data to 3-hour block averages; and** **c. Maintaining the 3-hour average pressure drop and liquid flow-rate at or above the operating limits established during the performance test according to §63.7530 (c).**

4. Wet Scrubber pH.	**a. Collecting the pH monitoring system data according to §§63.7525 and 63.7535; and** **b. Reducing the data to 3-hour block averages; and** **c. Maintaining the 3-hour average pH at or above the operating limit established during the performance test according to §63.7530(c).**
5. Dry Scrubber Sorbent or Carbon Injection Rate.	**a. Collecting the sorbent or carbon injection rate monitoring system data for the dry scrubber according to §§63.7525 and 63.7535; and** **b. Reducing the data to 3-hour block averages; and** **c. Maintaining the 3-hour average sorbent or carbon injection rate at or above the operating limit established during the performance test according to §63.7530(c).**
6. Electrostatic Precipitator Secondary Current and Voltage or Total Power Input.	**a. Collecting the secondary current and voltage or total power input monitoring system data for the electrostatic precipitator according to §§63.7525 and 63.7535; and** **b. educing the data to 3-hour block averages; and** **c. Maintaining the 3-hour average secondary current and voltage or total power input at or above the operating limits established during the performance test according to §63.7530(c).**
7. Fuel Pollutant Content.	**a. Only burning the fuel types and fuel mixtures used to demonstrate compliance with the applicable emission limit according to §63.7530(c) or (d) as applicable; and** **b. Keeping monthly records of fuel use according to §63.7540(a).**

Table 9 to Subpart DDDDD of Part 63 — Reporting Requirements
As stated in §63.7550, you must comply with the following requirements for reports:

You must submit a(n)	The report must contain...	You must submit the report...

1. compliance report	**a. information required in §63.7550(c)(1)through(11)** **AND** **b. if there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards in Table 8 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in §63.8(c)(7), a statement that there were no periods during the which the CMSs were out-of-control during the reporting period** **AND** **c. if you have a deviation from any emission limitation (emission limit and operating limit) or work practice standard during the reporting period, the report must contain the information in §63.7550(d). If there were periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control, as specified in §63.8(c)(7), the report must contain the information in §63.7550(e)** **AND** **d. if you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in §63.10(d)(5)(i)**	**semiannually according to the requirements in §63.7550(b).**

2. an immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your startup, shutdown, and malfunction plan	**a. actions taken for the event** **AND** **b. The information in §63.10(d)(5)(ii)**	**i. by fax or telephone within 2 working days after starting actions inconsistent with the plan;** **and** **ii. by letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority.**

Table 10 to Subpart DDDDD of Part 63 — Applicability of General Provisions to Subpart DDDDD

As stated in §63.7565, you must comply with the applicable General Provisions according to the following:

Citation	Subject	Brief Description	Applicable
§63.1	**Applicability**	**Initial Applicability Determination; Applicability After Standard Established; Permit Requirements; Extensions, Notifications**	**Yes.**
§63.2	**Definitions**	**Definitions for part 63 standards**	**Yes.**
§63.3	**Units and Abbreviations**	**Units and abbreviations for part 63 standards**	**Yes.**
§63.4	**Prohibited Activities**	**Prohibited Activities; Compliance date; Circumvention, Severability**	**Yes.**
§63.5	**Construction/Reconstruction**	**Applicability; applications; approvals**	**Yes.**
§63.6(a)	**Applicability**	**GP apply unless compliance extension** **AND** **GP apply to area sources that become major**	**Yes.**

§63.6(b)(1)-(4)	Compliance Dates for New and Reconstructed sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for 112(f)	Yes.
§63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	Yes.
§63.6(c)(1)-(2)	Compliance Dates for Existing Sources	Comply according to date in subpart, which must be no later than 3 years after effective date AND For 112(f) standards, comply within 90 days of effective date unless compliance extension	Yes.
§63.6(c)(3)-(4)	[Reserved]		
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Area sources that become major must comply with major source standards by date indicated in subpart or by equivalent time period (e.g.,example, 3 years)	Yes.
§63.6(d)	[Reserved]		

§63.6(e)(1)-(2)	Operation & Maintenance	Operate to minimize emissions at all times AND Correct malfunctions as soon as practicable AND Operation and maintenance requirements independently enforceable information Administrator will use to determine if operation and maintenance requirements were met	Yes.
§63.6(e)(3)	Startup, Shutdown, and Malfunction Plan (SSMP)	Requirement for SSM and startup, shutdown, malfunction plan Content of SSMP	Yes.
§63.6(f)(1)	Compliance Except During SSM	Comply with emission standards at all times except during SSM	Yes.
§63.6(f)(2)-(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§63.6(g)(1)-(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§63.6(h)(1)	Compliance with Opacity/VE Standards	Comply with opacity/VE emission limitations at all times except during SSM	Yes.
§63.6(h)(2)(i)	Determining Compliance with Opacity/Visible Emission (VE) Standards	If standard does not state test method, use Method 9 for opacity and Method 22 for VE	No.
§63.6(h)(2)(ii)	[Reserved]		
§63.6(h)(2)(iii)	Using Previous Tests to Demonstrate Compliance with Opacity/VE Standards	Criteria for when previous opacity/VE testing can be used to show compliance with this subpart	Yes.
§63.6(h)(3)	[Reserved]		
§63.6(h)(4)	Notification of Opacity/VE Observation Date	Notify Administrator of anticipated date of observation	No.

§63.6(h)(5)(i), (iii)-(v)	Conducting Opacity/VE Observations	Dates and Schedule for conducting opacity/VE observations	No.
§63.6(h)(5)(ii)	Opacity Test Duration and Averaging Times	Must have at least 3 hours of observation with thirty, 6-minute averages	No.
§63.6(h)(6)	Records of Conditions During Opacity/VE observations	Keep records available and allow Administrator to inspect	No.
§63.6(h)(7)(i)	Report continuous opacity monitoring system Monitoring Data from Performance Test	Submit continuous opacity monitoring system data with other performance test data	Yes.
§63.6(h)(7)(ii)	Using continuous opacity monitoring system instead of Method 9	Can submit continuous opacity monitoring system data instead of Method 9 results even if subpart requires Method 9, but must notify Administrator before performance test	No.
§63.6(h)(7)(iii)	Averaging time for continuous opacity monitoring system during performance test	To determine compliance, must reduce continuous opacity monitoring system data to 6-minute averages	Yes.
§63.6(h)(7)(iv)	Continuous opacity monitoring system requirements	Demonstrate that continuous opacity monitoring system performance evaluations are conducted according to §§63.8(e), continuous opacity monitoring system are properly maintained and operated according to 63.8(c) and data quality as §63.8(d)	Yes.

§63.6(h)(7)(v)	Determining Compliance with Opacity/VE Standards	Continuous opacity monitoring system is probative but not conclusive evidence of compliance with opacity standard, even if Method 9 observation shows otherwise. Requirements for continuous opacity monitoring system to be probative evidence–proper maintenance, meeting PS 1, and data have not been altered	Yes.
§63.6(h)(8)	Determining Compliance with Opacity/VE Standards	Administrator will use all continuous opacity monitoring system, Method 9, and Method 22 results, as well as information about operation and maintenance to determine compliance	Yes.
§63.6(h)(9)	Adjusted Opacity Standard	Procedures for Administrator to adjust an opacity standard	Yes.
§63.6(i)(1)-(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§63.6(j)	Presidential Compliance Exemption	President may exempt source category from requirement to comply with rule	Yes.
§63.7(a)(1)	Performance Test Dates	Dates for Conducting Initial Performance Testing and Other Compliance Demonstrations	Yes.
§63.7(a)(2)	Performance Test Dates	New source with initial startup date before effective date has 180 days after effective date to demonstrate compliance	Yes.
§63.7(a)(2)(ii-viii)	[Reserved]		

§63.7(a)(2)(ix)	Performance Test Dates	New source that commenced construction between proposal and promulgation dates, when promulgated standard is more stringent than proposed standard, has 180 days after effective date or 180 days after startup of source, whichever is later, to demonstrate compliance AND If source initially demonstrates compliance with less stringent proposed standard, it has 3 years and 180 days after the effective date of the standard or 180 days after startup of source, whichever is later, to demonstrate compliance with promulgated standard	Yes. No.
§63.7(a)(3)	Section 114 Authority	Administrator may require a performance test under CAA Section 114 at any time	Yes.
§63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§63.7(b)(2)	Notification of Rescheduling	If rescheduling a performance test is necessary, must notify Administrator 5 days before scheduled date of rescheduled date	Yes.
§63.7(c)	Quality Assurance/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with: Test plan approval procedures AND Performance audit requirements AND Internal and External QA procedures for testing	Yes.
§63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
§63.7(e)(1)	Conditions for Conducting Performance Tests	Performance tests must be conducted under representative conditions	No.

		AND	
		Cannot conduct performance tests during SSM.	Yes.
		AND	
		Not a deviation to exceed standard during SSM	Yes.
		AND	
		Upon request of Administrator, make available records necessary to determine conditions of performance tests	Yes.
§63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to rule and EPA test methods unless Administrator approves alternative	Yes.
§63.7(e)(3)	Test Run Duration	Must have three separate test runs AND Compliance is based on arithmetic mean of three runs AND Conditions when data from an additional test run can be used	Yes.
§63.7(e)(4)	Interaction with other sections of the Act.	Nothing in §63.7(e)(1) through (4) can abrogate the Administrator's authority to require testing under Section 114 of the Act.	Yes.
§63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an alternative test method	Yes.
§63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report AND Must submit performance test data 60 days after end of test with the Notification of Compliance Status AND Keep data for 5 years	Yes.

§63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§63.8(a)(2)	Performance Specifications	Performance Specifications in appendix B of part 60 apply	Yes.
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring with Flares	Unless your rule says otherwise, the requirements for flares in §63.11 apply	No.
§63.8(b)(1)(i)-(ii)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.
§63.8(b)(1)(iii)	Monitoring	Flares not subject to this section unless otherwise specified in relevant standard	No.
§63.8(b)(2)-(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems AND Must install on each effluent before it is combined and before it is released to the atmosphere unless Administrator approves otherwise AND If more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	Yes.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	Yes.
§63.8(c)(1)(i)	Routine and Predictable SSM	Maintain and operate CMS according to §63.6(e)(1)	Yes.
§63.8(c)(1)(ii)	SSM not in SSMP	Must keep necessary parts available for routine repairs of CMSs	Yes.

§63.8(c)(1)(iii)	Compliance with Operation and Maintenance Requirements	Must develop and implement an SSMP for CMSs	Yes.
§63.8(c)(2)-(3)	Monitoring System Installation	Must install to get representative emission and parameter measurements AND Must verify operational status before or at performance test	Yes.
§63.8(c)(4)	Continuous Monitoring System (CMS) Requirements	CMSs must be operating except during breakdown, out-of-control, repair, maintenance, and high-level calibration drifts	No.
§63.8(c)(4)(i)	Continuous Monitoring System (CMS) Requirements	Continuous opacity monitoring system must have a minimum of one cycle of sampling and analysis for each successive 10-second period and one cycle of data recording for each successive 6-minute period	Yes.
§63.8(c)(4)(ii)	Continuous Monitoring System (CMS) Requirements	Continuous emissions monitoring system must have a minimum of one cycle of operation for each successive 15-minute period	No.
§63.8(c)(5)	Continuous Opacity Monitoring system (COMS) Requirements	Must do daily zero and high level calibrations	Yes.
§63.8(c)(6)	Continuous Monitoring System (CMS) Requirements	Must do daily zero and high level calibrations	No.
§63.8(c)(7)-(8)	Continuous monitoring systems Requirements	Out-of-control periods, including reporting	Yes.

§63.8(d)	Continuous monitoring systems Quality Control	Requirements for continuous monitoring systems quality control, including calibration, etc. AND Must keep quality control plan on record for the life of the affected source. Keep old versions for 5 years after revisions	Yes.
§63.8(e)	Continuous monitoring systems Performance Evaluation	Notification, performance evaluation test plan, reports	Yes.
§63.8(f)(1)-(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	Yes.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for continuous emissions monitoring system	No.
§63.8(g)(1)-(4)	Data Reduction	Continuous opacity monitoring system 6-minute averages calculated over at least 36 evenly spaced data points AND Continuous emissions monitoring system 1-hour averages computed over at least 4 equally spaced data points	Yes.
§63.8(g)(5)	Data Reduction	Data that cannot be used in computing averages for continuous emissions monitoring system and continuous opacity monitoring system	No.
§63.9(a)	Notification Requirements	Applicability and State Delegation	Yes.

§63.9(b)(1)-(5)	Initial Notifications	Submit notification 120 days after effective date AND Notification of intent to construct/ reconstruct AND Notification of commencement of construct/reconstruct; Notification of startup AND Contents of each	Yes.
§63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed BACT/LAER	Yes.
§63.9(d)	Notification of Special Compliance Requirements for New Source	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
§63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	Yes.
§63.9(f)	Notification of VE/Opacity Test	Notify Administrator 30 days prior	No.

§63.9(g)	Additional Notifications When Using Continuous Monitoring Systems	Notification of performance evaluation AND Notification using continuous opacity monitoring system data AND Notification that exceeded criterion for relative accuracy	Yes.
§63.9(h)(1)-(6)	Notification of Compliance Status	Contents AND Due 60 days after end of performance test or other compliance demonstration, When to submit to Federal vs. State authority	Yes.
§63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change in when notifications must be submitted	Yes.
§63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.
§63.10(a)	Record keeping/Reporting	Applies to all, unless compliance extension AND When to submit to Federal vs. State authority AND Procedures for owners of more than 1 source	Yes.

§63.10(b)(1)	Record keeping/Reporting	General Requirements AND Keep all records readily available AND Keep for 5 years	Yes.
§63.10(b)(2)(i)-(v)	Records related to Startup, Shutdown, and Malfunction	Occurrence of each of operation (process equipment) AND Occurrence of each malfunction of air pollution equipment AND Maintenance on air pollution control equipment AND Actions during startup, shutdown, and malfunction	Yes.
§63.10(b)(2)(vi) and (x-xi)	Continuous monitoring systems Records	Malfunctions, inoperative, out-of-control AND Calibration checks AND Adjustments, maintenance	Yes.

§63.10(b)(2)(vii)-(ix)	Records	Measurements to demonstrate compliance with emission limitations AND Performance test, performance evaluation, and visible emission observation results AND Measurements to determine conditions of performance tests and performance evaluations.	Yes.
§63.10(b)(2)(xii)	Records	Records when under waiver	Yes.
§63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	No.
§63.10(b)(2)(xiv)	Records	All documentation supporting Initial Notification and Notification of Compliance Status	Yes.
§63.10(b)(3)	Records	Applicability Determinations	Yes.
§63.10(c)(1),(5)-(8),(10)-(15)	Records	Additional Records for continuous monitoring systems	Yes.
§63.10(c)(7)-(8)	Records	Records of excess emissions and parameter monitoring exceedances for continuous monitoring systems	No.
§63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.
§63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.
§63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	Yes.
§63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.
§63.10(d)(5)	Startup, Shutdown, and Malfunction Reports	Contents and submission	Yes.

§63.10(e)(1)-(2)	Additional continuous monitoring systems Reports	Must report results for each CEM on a unit AND Written copy of performance evaluation AND 3 copies of continuous opacity monitoring system performance evaluation	Yes.
§63.10(e)(3)	Reports	Excess Emission Reports	No.
§63.10(e)(3)(i-iii)	Reports	Schedule for reporting excess emissions and parameter monitor exceedance (now defined as deviations)	No.

§63.10(e)(3)(iv-v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedance (now defined as deviations) AND Provision to request semiannual reporting after compliance for one year AND Submit report by 30th day following end of quarter or calendar half AND If there has not been an exceedance or excess emission (now defined as deviations), report contents is a statement that there have been no deviations	No.
§63.10(e)(3)(iv-v)	Excess Emissions Reports	Must submit report containing all of the information in §63.10(c)(5-13), §63.8(c)(7-8)	No.
§63.10(e)(3)(vi-viii)	Excess Emissions Report and Summary Report	Requirements for reporting excess emissions for continuous monitoring systems (now called deviations) Requires all of the information in §63.10(c)(5-13), §63.8(c)(7-8)	No.
§63.10(e)(4)	Reporting continuous opacity monitoring system data	Must submit continuous opacity monitoring system data with performance test data	Yes.
§63.10(f)	Waiver for Record keeping/Reporting	Procedures for Administrator to waive	Yes.
§63.11	Flares	Requirements for flares	No.
§63.12	Delegation	State authority to enforce standards	Yes.

§63.13	**Addresses**	**Addresses where reports, notifications, and requests are sent**	**Yes.**
§63.14	**Incorporation by Reference**	**Test methods incorporated by reference**	**Yes.**
§63.15	**Availability of Information**	**Public and confidential information**	**Yes.**

bb. Appendix A to Subpart DDDDD – Methodology and Criteria for Demonstrating Eligibility for the Health-Based Compliance Alternatives Specified for the Large Solid Fuel Subcategory

1. Purpose/Introduction

This appendix provides the methodology and criteria for demonstrating that your affected source is eligible for the compliance alternative for the HCl emission limit and/or the total selected metals (TSM) emission limit. This appendix specifies emissions testing methods that you must use to determine HCl, chlorine, and manganese emissions from the affected units and what parts of the affected source facility must be included in the eligibility demonstration. You must demonstrate that your affected source is eligible for the health-based compliance alternatives using either a look-up table analysis (based on the look-up tables included in this appendix) or a site-specific compliance demonstration performed according to the criteria specified in this appendix. This appendix also specifies how and when you file any eligibility demonstrations for your affected source and how to show that your affected source remains eligible for the health-based compliance alternatives in the future.

2. Who is eligible to demonstrate that they qualify for the health-based compliance alternatives?

Each new, reconstructed, or existing affected source may demonstrate that they are eligible for the health-based compliance alternatives. Section 63.7490 of subpart DDDDD defines the affected source and explains which affected sources are new, existing, or reconstructed.

3. What parts of my facility have to be included in the health-based eligibility demonstration?

If you are attempting to determine your eligibility for the compliance alternative for HCl, you must include every emission point subject to subpart DDDDD in the eligibility demonstration.

If you are attempting to determine your eligibility for the compliance alternative for TSM, you must include every emission point subject to subpart DDDDD in the eligibility demonstration.

4. How do I determine HAP emissions from my affected source?

(a) You must conduct HAP emissions tests for every emission point covered under subpart DDDDD within the affected source facility according to the requirements in paragraphs (b) through (f) of this section and the methods specified in Table 1 of this appendix.

If you are attempting to determine your eligibility for the compliance alternative for HCl, you must test the subpart DDDDD units at your facility for both HCl and Cl_2.

If you are attempting to determine your eligibility for the compliance alternative for TSM, you must test the subpart DDDDD units at your facility for manganese.

(b) Periods when emissions tests must be conducted.

(1) You must not conduct emissions tests during periods of startup, shutdown, or malfunction, as specified in §63.7(e)(1).

(2) You must test under worst-case operating conditions as defined in this appendix. You must describe your worst-case operating conditions in your performance test report for the process and control systems (if applicable) and explain why the conditions are worst-case.

(c) Number of test runs. You must conduct three separate test runs for each test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.

(d) Sampling locations. Sampling sites must be located at the outlet of the control device and prior to any releases to the atmosphere.

(e) Collection of monitoring data for HAP control devices. During the emissions test, you must collect operating parameter monitoring system data at least every 15 minutes during the entire emissions test and establish the site-specific operating requirements in Tables 3 or 4, as appropriate, of subpart DDDDD using data from the monitoring system and the procedures specified in §63.7530 of subpart DDDDD.

(f) Nondetect data. You may treat emissions of an individual HAP as zero if all of the test runs result in a nondetect measurement and the condition in paragraph (1) is met for the manganese test method. Otherwise nondetect data for individual HAP

must be treated as one-half of the method detection limit.

(1) For manganese measured using Method 29 in appendix A to 40 CFR part 60, you analyze samples using atomic absorption spectroscopy (AAS).

(g) You must determine the maximum hourly emission rate for each appropriate emission point according to equation 1.

(Eq. 1)

where:

MaxHourly Emissions = Maximum hourly emissions for hydrogen chloride, chlorine, or manganese, in units of pounds per hour.

Er = Emission rate (the 3-run average as determined according to Table 1 of this appendix) for hydrogen chloride, chlorine, or manganese, in units of pounds per million Btu of heat input.

Hm = Maximum rated heat input capacity of appropriate emission point, in units of million Btu per hour.

5. What are the criteria for determining if my facility is eligible for the health-based compliance alternatives?

(a) Determine the HAP emissions from each appropriate emission point within the affected source facility using the procedures specified in section 4 of this appendix.

(b) Demonstrate that your facility is eligible for either of the health-based compliance alternatives using either the methods described in section 6 of this appendix (look-up table analysis) or section 7 of this appendix (site-specific compliance demonstration).

$$AveWeightedEmissions = \sum_{i=1}^{n} (Er \times Hm) \div \sum_{i=1}^{n} Hm$$

(c) Your facility is eligible for the health-based compliance alternative for HCl if 1 of the following 2 statements is true:

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

(2) Your site-specific compliance demonstration indicates that your maximum HI for HC1 and $C1_2$ at a location where people live is less than or equal to 1.0;

(d) Your facility is eligible for the health-based compliance alternative for TSM if 1 of the following 2 statements is true:

(1) The manganese emission rate for all your subpart DDDDD sources is below the appropriate value in the look-up table;

(2) Your site-specific compliance demonstration indicates that your maximum HQ for manganese at a location where people live is less than or equal to 1.0;

6. How do I conduct a look-up table analysis?

You may use look-up tables to demonstrate that your facility is eligible for either the compliance alternative for the HCl emission limit or the compliance alternative for TSM emission limit.

(a) HCl health-based compliance alternative. To calculate the total toxicity-weighted HCl-equivalent emission rate for your facility, first calculate the total affected source emission rate of HCl by summing the maximum hourly HCl emission rates from all your subpart DDDDD sources. Then, similarly, calculate the total affected source emission rate for Cl_2. Finally, calculate the toxicity-weighted emission rate (expressed in HCl equivalents) according to equation 2 of this appendix.

$$ER_{tw} = \sum(ER_i \, x \, (RfC_{HCl}/RfC_i)) \qquad Eq. 2$$

where:

ER_{tw} is the HC1-equivalent emission rate, lb/hr
ER_i is the emission rate of HAP i in lbs/hr
RfC_i is the reference concentration of HAP i
RfC_{HCl} is the reference concentration of HCl (RfCs for HC1 and $C1_2$ can be found at http://www.epa.gov/ttn/atw/toxsource/summary.html)

The calculated HCl-equivalent emission rate will then be compared to the appropriate allowable emission rate in Table 2 of this appendix. To determine the correct value from the table, a subpart DDDDD average

value should be used for stack height and the minimum distance between any subpart DDDDD stack at the facility and the property boundary should be used for property boundary distance. If one or both of these values do not match the exact values in the lookup tables then use the next lowest table value. (Note: If your average stack height is less than 5 meters, you must use the 5 meter row.) Your facility is eligible to comply with the health-based alternative HCl emission limit if your toxicity-weighted HCl equivalent emission rate, determined using the methods specified in this appendix, does not exceed the appropriate value in Table 2 of this appendix.

(b) TSM Compliance Alternative. To calculate the total manganese emission rate for your affected source, sum the maximum hourly manganese emission rates for all your subpart DDDDD sources. The calculated manganese emission rate will then be compared to the allowable emission rate in the Table 3 of this appendix. To determine the correct value from the table, a subpart DDDDD average value should be used for stack height and the minimum distance between any subpart DDDDD stack at the facility and the property boundary should be used for property boundary distance. If one or both of these values do not match the exact values in the lookup tables then use the next lowest table value. (Note: If your average stack height is less than 5 meters, you must use the 5 meter row.) Your facility may exclude manganese when demonstrating compliance with the TSM emission limit if your manganese emission rate, determined using the methods specified in this appendix, does not exceed the appropriate value specified in Table 3 of this appendix.

7. How do I conduct a site-specific compliance demonstration?

If you fail to demonstrate that your facility is able to comply with one or both of the alternative health-based emission standards using the lookup table approach, you may choose to perform a site-specific compliance demonstration for your facility. You may use any scientifically-accepted peer-reviewed risk assessment methodology for your site-specific compliance demonstration. An example of one approach for performing a site-specific compliance demonstration for air toxics can be found in the EPA's "Air Toxics Risk Assessment Reference Library, Volume 2, Site-Specific Risk Assessment Technical Resource Document", which may be obtained through the EPA's Air Toxics Website at www.epa.gov/ttn/atw.

(a) Your facility is eligible for the HCl alternative compliance option if your site-specific compliance demonstration shows that the maximum HI for

HC1 and Cl_2 from your subpart DDDDD sources is less than 1.0.

(b) Your facility is eligible for the TSM alternative compliance option if your site-specific compliance demonstration shows that the maximum HQ for manganese from your subpart DDDDD sources is less than 1.0.

(c) at a minimum, your site-specific compliance demonstration must:

(1) estimate long-term inhalation exposures through the estimation of annual or multi-year average ambient concentrations;

(2) estimate the inhalation exposure for the individual most exposed to the facility's emissions;

(3) use site-specific, quality-assured data wherever possible;

(4) use health-protective default assumptions wherever site-specific data are not available, and;

(5) contain adequate documentation of the data and methods used for the assessment so that it is transparent and can be reproduced by an experienced risk assessor and emissions measurement expert.

(d) Your site-specific compliance demonstration need not:

(1) assume any attenuation of exposure concentrations due to the penetration of outdoor pollutants into indoor exposure areas;

(2) assume any reaction or deposition of the emitted pollutants during transport from the emission point to the point of exposure;

8. What must my health-based eligibility demonstration contain?

(a) Your health-based eligibility demonstration must contain, at a minimum, the information specified in paragraphs (a)(1) through (6) of this section.

(1) Identification of each appropriate emission point at the affected source facility, including the maximum rated capacity of each appropriate emission point.

(2) Stack parameters for each appropriate emission point including, but not limited to, the parameters listed in (a)(2)(i) through (iv) below:

(i) Emission release type

(ii) Stack height, stack area, stack gas temperature, and stack

gas exit velocity

(iii) Plot plan showing all emission points, nearby residences, and fenceline.

(iv) Identification of any control devices used to reduce emissions from each appropriate emission point.

(3) Emission test reports for each pollutant and appropriate emission point which has been tested using the test methods specified in Table 1 of this appendix, including a description of the process parameters identified as being worst case. For those emissions which are not measured but are included in the assessment, the calculation method used, the inputs and outputs of any estimation developed, and any supporting references should be included in the documentation.

(4) Identification of the RfC values used in your look-up table analysis or site-specific compliance demonstration.

(5) Calculations used to determine the HCl-equivalent or manganese emission rates according to sections 6(a) or (b) of this appendix.

(6) Identification of the controlling process factors (including, but not limited to, fuel type, heat input rate, type of control devices, process parameters reflecting the emissions rates used for your eligibility demonstration) that will become Federally enforceable permit conditions used to show that your facility remains eligible for the health-based compliance alternatives.

(b) If you use the look-up table analysis in section 6 of this appendix to demonstrate that your facility is eligible for either health-based compliance alternative, your eligibility demonstration must contain, at a minimum, the information in paragraphs (a) and (b)(1) through (3) of this section.

(1) Calculations used to determine the average stack height of the subpart DDDDD emission points.

(2) Identification of the subpart DDDDD emission point with the minimum distance to the property boundary of the facility.

(3) Comparison of the values in the look-up tables (Tables 2 and 3 of this appendix) to your maximum HCl-equivalent or manganese emission rates.

(c) If you use a site-specific compliance demonstration as described in section 7 of this appendix to demonstrate that your facility is eligible, your eligibility demonstration must contain, at a minimum, the information in paragraphs (a) and (c)(1) through (7) of this section:

(1) Identification of the risk assessment methodology used.

(2) Documentation of the fate and transport model used.

(3) Documentation of the fate and transport model inputs, including the information described in paragraphs (a)(1) through (5) of this section converted to the dimensions required for the model and all of the following that apply: meteorological data; building, land use, and terrain data; receptor locations and population data; and other facility-specific parameters input into the model.

(4) Documentation of the fate and transport model outputs.

(5) Documentation of any exposure assessment and risk characterization calculations.

(6) Comparison of the HQ HI to the limit of 1.0.

9. When do I have to complete and submit my health-based eligibility demonstration?

(a) If you have an existing affected source, you must complete and submit your eligibility demonstration to your permitting authority, along with a signed certification that the demonstration is an accurate depiction of your facility, no later than the date one year prior to the compliance date of subpart DDDDD. A separate copy of the eligibility demonstration must be submitted to: U.S. EPA, Risk and Exposure Assessment Group, Emission Standards Division (C404-01), Attn: Group Leader, Research Triangle Park, North Carolina 27711.

(b) If you have a new or reconstructed affected source that starts up before the effective date of subpart DDDDD, or an affected source that is an area source that increases its emissions or its potential to emit such that it

becomes a major source of HAP before the effective date of subpart DDDDD, then you must comply with the requirements of subpart DDDDD until your eligibility demonstration is completed and submitted to your permitting authority.

(c) If you have a new or reconstructed affected source that starts up after the effective date for subpart DDDDD, or an affected source that is an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP after the effective date for subpart DDDDD, then you must follow the schedule in paragraphs (1) and (2) of this section.

(1) You must complete and submit a preliminary eligibility demonstration based on the information (e.g., equipment types, estimated emission rates, etc.) used to obtain your title V permit. You must base your preliminary eligibility demonstration on the maximum emissions allowed under your title V permit. If the preliminary eligibility demonstration indicates that your affected source facility is eligible for either compliance alternative, then you may start up your new affected source and your new affected source will be considered in compliance with the alternative HCl standard and subject to the compliance requirements in this appendix or, in the case of manganese, your compliance demonstration with the TSM emission limit is based on 7 metals (excluding manganese).

(2) You must conduct the emission tests specified in section 4 of this appendix upon initial startup and use the results of these emissions tests to complete and submit your eligibility demonstration within 180 days following your initial startup date. To be eligible, you must meet the criteria in section 11 of this appendix within 18 months following initial startup of your affected source.

10. When do I become eligible for the health-based compliance alternatives?

To be eligible for either health-based compliance alternative, the parameters that defined your affected source as eligible for the health-based compliance alternatives (including, but not limited to, fuel type, type of control devices, process parameters reflecting the emissions rates used for your eligibility demonstration) must be incorporated as Federally enforceable limits into your title V permit. If you do not meet these criteria, then your affected source is subject to the applicable emission limits, operating limits, and work practice standards in Subpart DDDDD.

11. How do I ensure that my facility remains eligible for the health-based compliance

alternatives?

(a) You must update your eligibility demonstration and resubmit it each time you have a process change, such that any of the parameters that defined your affected source changes in a way that could result in increased HAP emissions (including, but not limited to, fuel type, change in type of control device, changes in process parameters documented as worst-case conditions during the emissions testing used for your approved eligibility demonstration).

(b) If you are updating your eligibility demonstration to account for an action in paragraph (a) of this section, then you must perform emission testing according to section 4 of this appendix for the subpart DDDDD emission points that may have increased HAP emissions beyond the levels reflected in your previously approved eligibility demonstration due to the process change. You must submit your revised eligibility demonstration to the permitting authority prior to revising your permit to incorporate the process change. If your updated eligibility demonstration indicates that your affected source is no longer eligible for the health-based compliance alternatives, then you must comply with the applicable emission limits, operating limits, and compliance requirements in Subpart DDDDD prior to making the process change and revising your permit.

12. What records must I keep?

You must keep records of the information used in developing the eligibility demonstration for your affected source, including all of the information specified in section 8 of this appendix.

13. Definitions.

The definitions in §63.7575 of subpart DDDDD apply to this appendix. Additional definitions applicable for this appendix are as follows:

<u>Hazard Index (HI)</u> means the sum of more than one hazard quotient for multiple substances and/or multiple exposure pathways.

<u>Hazard Quotient (HQ)</u> means the ratio of the predicted media concentration of a pollutant to the media concentration at which no adverse effects are expected. For inhalation exposures, the HQ is calculated as the air concentration divided by the RfC.

Look-up table analysis means a risk screening analysis based on comparing the HAP or HAP-equivalent emission rate from the affected source to the appropriate maximum allowable HAP or HAP-equivalent emission rates specified in Tables 2 and 3 of this appendix.

Reference Concentration (RfC) means an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime. It can be derived from various types of human or animal data, with uncertainty factors generally applied to reflect limitations of the data used.

Worst-case operating conditions means operation of an affected unit during emissions testing under the conditions that result in the highest HAP emissions or that result in the emissions stream composition (including HAP and non-HAP) that is most challenging for the control device if a control device is used. For example, worst case conditions could include operation of an affected unit firing solid fuel likely to produce the most HAP.

Table 1 to Appendix B of Subpart DDDDD. Emission Test Methods.

For...	You must...	Using...
(1) each subpart DDDDD emission point for which you choose to use a compliance alternative	select sampling ports' location and the number of traverse points	Method 1 of 40 CFR part 60, appendix A.
(2) each emission DDDDD emission point for which you choose to use a compliance alternative	determine velocity and volumetric flow rate;	Method 2, 2F, or 2G in appendix A to 40 CFR part 60.
(3) each emission DDDDD emission point for which you choose to use a compliance alternative	conduct gas molecular weight analysis	Method 3A or 3B in appendix A to 40 CFR part 60.
(4) each emission DDDDD emission point for which you choose to use a compliance alternative	measure moisture content of the stack gas	Method 4 in appendix A to 40 CFR part 60.
(5) each emission DDDDD emission point for which you choose to use the HCl compliance alternative	measure the hydrogen chloride and chlorine emission concentrations	Method 26 or 26A in appendix A to 40 CFR part 60.
(6) each emission DDDDD emission point for which you choose to use the TSM compliance alternative	measure the manganese emission concentration	Method 29 in appendix A to 40 CFR part 60.
(7) each emission DDDDD emission point for which you choose to use a compliance alternative	convert emissions concentration to lb per MMBtu emission rates.	Method 19 F-factor methodology in appendix A to part 60 of this chapter.

Table 2 to Appendix A of Subpart DDDDD. Allowable toxicity-weighted emission rate expressed in HCl

equivalents (lbs/hr)

	distance to property boundary (m)											
Stack ht.(m)	**0**	**50**	**100**	**150**	**200**	**250**	**500**	**1000**	**1500**	**2000**	**3000**	**5000**
5	114.9	114.9	114.9	114.9	114.9	114.9	144.3	287.3	373	373	373	373
10	188.5	188.5	188.5	188.5	188.5	188.5	195.3	328	453.5	34.4	434.4	434.4
20	386.1	386.1	386.1	386.1	386.1	386.1	386.1	425.4	580.0	602.7	602.7	602.7
30	396.1	396.1	396.1	396.1	396.1	396.1	396.1	436.3	596.2	690.6	807.8	816.5
40	408.1	408.1	408.1	408.1	408.1	408.1	408.1	448.2	613.3	715.5	832.2	966.0
50	421.4	421.4	421.4	421.4	421.4	421.4	421.4	460.6	631.0	746.3	858.2	1002.8
60	435.5	435.5	435.5	435.5	435.5	435.5	435.5	473.4	649.0	778.6	885.0	1043.4
70	450.2	450.2	450.2	450.2	450.2	450.2	450.2	486.6	667.4	813.8	912.4	1087.4
80	465.5	465.5	465.5	465.5	465.5	465.5	465.5	500.0	685.9	849.8	940.9	1134.8
100	497.5	497.5	497.5	497.5	497.5	497.5	497.5	527.4	723.6	917.1	1001.2	1241.3
200	677.3	677.3	677.3	677.3	677.3	677.3	677.3	682.3	919.8	1167.1	1390.4	1924.6

Table 3 to Appendix A of Subpart DDDDD. Allowable Manganese Emission Rate (lbs/hr)

	distance to property boundary (m)											
Stack ht.(m)	**0**	**50**	**100**	**150**	**200**	**250**	**500**	**1000**	**1500**	**2000**	**3000**	**5000**
5	0.29	0.29	0.29	0.29	0.29	0.29	0.36	0.72	0.93	0.93	0.93	0.93
10	0.47	0.47	0.47	0.47	0.47	0.47	0.49	0.82	1.13	1.09	1.09	1.09
20	0.97	0.97	0.97	0.97	0.97	0.97	0.97	1.06	1.45	1.51	1.51	1.51
30	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.09	1.49	1.73	2.02	2.04
40	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.12	1.53	1.79	2.08	2.42
50	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.15	1.58	1.87	2.15	2.51
60	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.18	1.62	1.95	2.21	2.61
70	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.22	1.67	2.03	2.28	2.72
80	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.25	1.71	2.12	2.35	2.84
100	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.32	1.81	2.29	2.50	3.10
200	1.69	1.69	1.69	1.69	1.69	1.69	1.69	1.71	2.30	2.92	3.48	4.81

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

1. The permit to install was evaluated based on the actual materials and the design parameters of the emission unit's exhaust system, as specified by the permittee in the permit to install application. The OEPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by the emission unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling:

Pollutant: Formaldehyde

TLV (ug/m3): 272 (converted from STEL)
Maximum Hourly Emission Rate (lb/hr): 3.07*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.20
MAGLC (ug/m3): 6.48

Pollutant: Sulfuric Acid
TLV (ug/m3): 200
Maximum Hourly Emission Rate (lb/hr): 2.3*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4.51
MAGLC (ug/m3): 4.76

Pollutant: Ammonia
TLV (ug/m3): 17,413
Maximum Hourly Emission Rate (lb/hr): 113*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 229
MAGLC (ug/m3): 414.6

Pollutant: Toluene
TLV (ug/m3): 188,405
Maximum Hourly Emission Rate (lb/hr): 1.11*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.26
MAGLC (ug/m3): 4,486

Pollutant: Xylene
TLV (ug/m3): 434,192
Maximum Hourly Emission Rate (lb/hr): 0.55*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.11
MAGLC (ug/m3): 10,338

Pollutant: Acetaldehyde
TLV (ug/m3): 33,195
Maximum Hourly Emission Rate (lb/hr): 0.341*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.690
MAGLC (ug/m3): 790

Pollutant: Ethyl Benzene
TLV (ug/m3): 434,192
Maximum Hourly Emission Rate (lb/hr): 0.27*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.550
MAGLC (ug/m3): 10,338

Pollutant: Propylene Oxide
TLV (ug/m3): 4,751
Maximum Hourly Emission Rate (lb/hr): 0.25*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.500
MAGLC (ug/m3): 113

* This was modeled for emissions units B001, P001, P002, and P003 combined.

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

    a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value specified in the above table;

    b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

    c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

    The permittee shall collect, record and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

    a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

    b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change

4. In order to reduce the maximum predicted 24-hour average PM_{10} modeled impacts to less than 25 ug/m3, the maximum daily operating hours of the equipment listed below shall not exceed the following, when all three combustion turbines are in operation:

emergency generator:	4 hours
fire water pump	1 hour
auxiliary boiler	1 hour

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements
B001 - 99 MMBtu/hr natural gas fired auxiliary boiler	OAC rule 3745-31-(10) thru (20)
	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07(A)

	Applicable Emissions Limitations/Control Measures	
OAC rule 3745-17-10(B)(1) OAC rule 3745-18-06(A) 40 CFR 60 Subpart Dc OAC rule 3745-31-05(C) 40 CFR Part 63 Subpart DDDDD	Nitrogen oxide (NOx) emissions shall not exceed: 0.05 lb/MMBtu actual heat input and 4.95 lbs/hr. Sulfur dioxide (SO2) emissions shall not exceed: 0.0057 lb/MMBtu actual heat input and 0.56 lb/hr. Carbon monoxide (CO) emission shall not exceed: 0.084 lb/MMBtu actual heat input and 8.32 lbs/hr. Volatile organic compounds (VOC) emissions shall not exceed: 0.0055 lb/MMBtu actual heat input and 0.545 lb/hr. Particulate(PE/PM_{10}) emissions shall not exceed: 0.0076 lb/MMBtu actual heat input and 0.76 lb/hr. NOx emissions shall not exceed 8.7 tons, per rolling 12 months. SO2 emissions shall not exceed 1.0 tons, per rolling 12 months. PE/PM_{10} emissions shall not exceed 1.3 tons, per rolling 12 months. CO emissions shall not exceed 14.6	tons, per rolling 12 months. VOC emissions shall not exceed 1.0 tons, per rolling 12 months. See Section A.I.2.b below. The requirements of this rule also includes compliance with the requirements of 40 CFR 60 Subpart Dc, OAC rule 3745-18-06(A), OAC rule 3745-17-10(B)(1), OAC rule 3745-17-07(A), and OAC rule 3745-31-(10) thru (20). Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average. see Section A.I.2.a below. see Section A.I.2.a below. see Section A.III.6 below. see Sections A.I.2.c and A.II.2. below. See facility section , Part II.A.4.

Issued: To be entered upon final issuance

2. Additional Terms and Conditions

2.a The requirements of this rule are less stringent than the requirements of OAC rule 3745-31-(10) thru (20) and/or 3745-31-05(A)(3).

2.b Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas, low sulfur fuel and low NOx burners constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

2.c The requirements of this rule are equivalent to the NOx, SO2, and PE/PM_{10} emissions per OAC rule 3745-31 (10) through (20).

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emission unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 standard cubic feet.

2. The maximum annual hours of operation of this emissions unit shall not exceed 3500, based upon a rolling, 12-month summation.

To ensure enforceability during the first 12 calendar months of operation following the startup of this emissions unit, the permittee shall not exceed the monthly hours of operation restrictions specified in the following table:

Month	Maximum Annual Cumulative Hours of Operation
1	292
1-2	583
1-3	875
1-4	1167
1-5	1458
1-6	1750
1-7	2042
1-8	2333
1-9	2625
1-10	2917
1-11	3208
1-12	3500

After the first 12 calendar months of operation of this emission unit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emission unit.

2. The permittee shall monitor the sulfur content and gross calorific value of the fuel being fired in the emission unit. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.

3. The permittee shall maintain daily records of the operating hours for this emissions unit.

4. The permittee shall maintain monthly records of the following information for this emission unit:

a. the monthly operating hours for the boiler;

b. during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month; and

b. beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the operating hours.

5. The facility shall install, maintain, and operate, in accordance with the manufacturer's specifications, instrumentation sufficient to track all natural gas usage during periods of operation.

6. The permittee shall maintain records of the amounts of fuel combusted during each day, per 40 CFR 60.48c(g).

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emission unit. Each report shall be submitted within 30 days after the deviation occurs.

2. The permittee shall submit quarterly deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per 100 standard cubic feet. These reports are due by the dates described in Part I - General Terms and Conditions of this permit under Section (A)(2).

3. The permittee shall submit annual reports which identify any exceedances of the daily operating hours limitation, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.

4. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation, and for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative operating hours levels. These reports are due by the dates described in Part 1 - General Terms and Conditions of this permit under Section (A)(2).

5. This emissions unit is subject to the applicable provisions of Subpart Dc of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, the permittee is hereby advised of the requirement to report the following at the appropriate times:

a. construction date (no later than 30 days after such date);

b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);

c. actual start-up date (within 15 days after such date); and

d. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P.O. Box 163669
Columbus, Ohio 43216-3669

and

Portsmouth Local Air Agency
605 Washington Street, Third Floor
Portsmouth, Ohio 45662

Emissions Unit ID: B001

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

a Emission Limitation:

0.05 lb/MMBtu NOx
4.95 lbs/hr NOx

Applicable Compliance Method:

Compliance with the lb/MMBtu emission limitation shall be demonstrated by multiplying the controlled AP-42 emission factor, Table 1.4-1, July 1998, (50 lbs NOx / MMscf) by the heat content of the natural gas (1 scf / 1000 Btu).

Compliance with the lbs/hr emission limitation shall be demonstrated by multiplying the lb/MMBtu emission limitation by the maximum heat input rate of 99 MMBtu/hr.

b. Emission Limitation:

0.0057 lb/MMBtu SO2
0.56 lb/hr SO2

Applicable Compliance Method:

The lb/MMBtu emission limitation was calculated from the allowable sulfur content in natural gas, 2 grains per 100 standard cubic feet. The supplier of the natural gas shall document the sulfur content of the fuel.

Compliance with the lb/hr emission limitation shall be demonstrated by multiplying the lb/MMBtu emission limitation by the maximum heat input rate of 99 MMBtu/hr.

c. Emission Limitation:

0.084 lb/MMBtu CO
8.32 lbs/hr CO

Applicable Compliance Method:

Compliance with the lb/MMBtu emission limitation shall be demonstrated by multiplying the AP-42 emission factor, Table 1.4-1, July 1998, (84 lbs CO / MMscf) by the heat content of the natural gas (1 scf / 1000 Btu).

Compliance with the lb/hr emission limitation shall be demonstrated by multiplying the lb/MMBtu emission limitation by the maximum heat input rate of 99 MMBtu/hr.

d. Emission Limitation:

0.0055 lb/MMBtu VOC
0.545 lb/hr VOC

Applicable Compliance Method:

Compliance with the lb/MMBtu emission limitation shall be demonstrated multiplying the AP-42 emission factor, Table 1.4-2, July 1998, (5.5 lbs VOC / MMscf) by the heat content of the natural gas (1 scf / 1000 Btu).

Compliance with the lb/hr emission limitation shall be demonstrated by multiplying the lb/MMBtu emission limitation by the maximum heat input rate of 99 MMBtu/hr.

e. Emission Limitation:

0.0076 lb/MMBtu PE/PM_{10}
0.75 lb/hr PE/PM_{10}

Applicable Compliance Method:

Compliance with the lb/MMBtu emission limitation shall be demonstrated by multiplying the AP-42 emission factor, Table 1.4-2, July 1998, (7.6 lbs PE / MMscf) by the heat content of the natural gas (1 scf / 1000 Btu).

Compliance with the lb/hr emission limitation shall be demonstrated by multiplying the lb/MMBtu emission limitation by the maximum heat input rate of 99 MMBtu/hr.

f. Emission Limitations:

8.7 tons of NOx per rolling 12 months
1.0 tons of SO_2 per rolling 12 months
1.3 tons of PE/PM_{10} per rolling 12 months
14.6 tons of CO per rolling 12 months
1.0 tons of VOC per rolling 12 months

Applicable Compliance Method:

Compliance with the rolling 12-month limits shall be determined by the record keeping required in Section A.III.4. The rolling 12-month summation of operating hours shall be multiplied by the hourly emissions limit for each pollutant and divided by 2000 lbs/ton in order to demonstrate compliance.

g. Emission Limitation:

Issued: To be entered upon final issuance

Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in OAC rule 3745-17-03(B)(1) determined according to Method 9 of 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
B001 - 99 MMBtu/hr natural gas fired auxiliary boiler	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements
P001 - 180 MW Westinghouse 501F natural gas fired combustion turbine No 1 with duct firing operating in combined cycle mode with selective catalytic reduction (SCR) and oxidation catalyst	OAC rule 3745-31-(10) through (20)

		OAC rule 3745-18-06(F)
	OAC rule 3745-31-05(A)(3)	
		OAC rule 3745-17-11(B)(4)
		OAC rule 3745-17-07(A)
		40 CFR Parts 72, 73, 74, 75 and 76
		OAC rule 3745-103
		40 CFR Part 60, Subpart KKKK
	40 CFR part 60, Subpart GG	
	40 CFR part 60, Subpart Da	

Applicable Emissions Limitations/Control Measures

EMISSION LIMITS WITHOUT DUCT BURNER FIRING:

Nitrogen oxides (NO_x) emissions shall not exceed 3.0 ppmvd at 15% Oxygen, based on a 3-hour block averaging period.

NOx emissions shall not exceed 24.1 lbs/hr.

Particulate emissions (PE/PM_{10}*) shall not exceed 0.0096 lb/MMBtu and 12.7 lbs/hr.

Sulfur dioxide (SO_2) emissions shall not exceed 0.0057 lb/MMBtu and 11.9 lbs/hr.

Carbon monoxide (CO) emissions shall not exceed the following, based on a 24-hour block averaging period:

2.0 ppmvd at 15% oxygen (when turbine load is at or above 75% without power augmentation)

10 ppmv at 15% oxygen (with power augmentation or when turbine load is below 75%)

CO emissions shall not exceed 9.8 lbs/hr
when turbine load is at or above 75 % without power augmentation or 32.4 lbs/hr with power augmentation** or when turbine load is below 75%

Volatile organic compounds (VOC) emissions shall not exceed 0.003 lb/MMBtu and 4.2 lbs/hr.

Sulfuric acid (H_2SO_4) emissions shall not exceed 0.00026 lb/MMBtu and 0.5 lbs/hr.

EMISSION LIMITS WITH DUCT BURNER FIRING:

NO_x emissions shall not exceed 3.0 ppmvd at 15% Oxygen, based on a 3-hour block averaging period.

NOx emissions shall not exceed 30.5 lbs/hr.

Particulate emissions (PE/PM_{10}) shall not exceed 0.0101 lb/MMBtu and 25.3 lbs/hr.

SO_2 emissions shall not exceed 0.0057 lb/MMBtu and 16.1 lbs/hr.

CO emissions shall not exceed 10 ppmvd at 15% Oxygen, based on a 24-hour block averaging period.

CO emissions shall not exceed 61.9 lbs/hr.

VOC emissions shall not exceed 0.0118 lb/MMBtu and 30.7 lbs/hr.

H_2SO_4 emissions shall not exceed 0.00026 lb/MMBtu and 0.7 lbs/hr.

STARTUP AND SHUTDOWN EMISSIONS (see Item A.II.3.):

NO_x emissions shall not exceed 67.5 tons, based on a 12 month rolling average.

CO emissions shall not exceed 295.8 tons, based on a 12 month rolling average.

VOC emissions shall not exceed 32.4 tons, based on a 12 month rolling average.

TOTAL TONS per rolling 12 months including startups and shutdowns:

NO_x emissions shall not exceed 182.8 tons, based on a 12 month rolling average.

SO_2 emissions shall not exceed 70.5 tons, based on a 12 month rolling average.

PE/PM_{10} emissions shall not exceed 110.8 tons, based on a 12 month rolling average.

CO emissions shall not exceed 529.8 tons, based on a 12 month rolling average.

VOC emissions shall not exceed 148.5 tons, based on a 12 month rolling average.

H_2SO_4 emissions shall not exceed 3.1 tons, based on a 12 month rolling average.	Formaldehyde emissions shall not exceed 1.02 lbs/hr.
see Section A.I.2.e below.	see Sections A.I.2.b and A.III.6 below.
The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart Da and GG, OAC rule 3745-18-06(F), 3745-17-11(B)(4), OAC rule 3745-17-07(A), and OAC 3745-31-(10) thru (20).	see Section A.I.2.c below.
	see Section A.I.2.a below.
	see Section A.I.2.a below.
	see Section A.I.2.a below.
	see Section A.I.2.d below.
Visible particulate emissions shall not exceed 10 % opacity as a six minute average.	see Section A.I.2.d below.
	see Section A.I.2.f below.
Ammonia (NH_3) emissions shall not exceed 165.1 tpy.	* all particulate emission are assumed to be PM_{10}
Formaldehyde shall not exceed 4.47 tpy.	** power augmentation is when steam from the heat recovery steam generator is injected into the combustion turbine generator
EMISSION LIMITS WITHOUT DUCT BURNER FIRING:	
NH_3 emissions shall not exceed 27.3 lbs/hr.	
Formaldehyde emissions shall not exceed 0.75 lb/hr.	
EMISSION LIMITS WITH DUCT BURNER FIRING:	
NH_3 emissions shall not exceed 37.7 lbs/hr.	

2. Additional Terms and Conditions

2.a The emissions limit based on this applicable rule is equivalent to or less stringent than the limit established pursuant to OAC rule 3745-31-(10) through (20).

2.b The emissions limits based on this standard are less stringent than the limits established pursuant to OAC rule 3745-31-(10) thru (20). The limit contained in this permit is more stringent that the limit calculated per CFR 60.332 for nitrogen oxides, using the manufacturer's heat rate at the manufacturer's rated load for "Y". The SO_2 limit contained in this permit, 2 grains SO_2/100scf, is more restrictive than required per CFR 60.333. Except as provided for in the terms and conditions in this permit, the permittee is not exempt from meeting any additional requirements of 40 CFR Part 60, Subpart GG.

2.c The particulate and visible emissions limits contained in this permit are more stringent than the limits established pursuant to 40 CFR Part 60, Subpart Da, in 60.42(a) and 60.42(b) respectively. And the 30-day rolling average limits, established per CFR 60.43(b) for sulfur dioxide emissions and per CFR 60.44(a) for nitrogen oxide emissions, are less stringent than the emissions limits contained in this permit, which are also established as hourly limits.

2.d The permittee is subject to the applicable requirements of 40 CFR Parts 72, 73, 74, 75, and 76, concerning the acid rain program. Per 40 CFR 72.30(b)(2)(ii) and OAC 3745-103-07(A)(2)(b) and (c), an application for a Part 72 permit shall be submitted at least 24 months prior to commencing operations. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

2.e The permittee is required to perform Best Available Control Technology (BACT) review for NOx, SO_2, CO, PM_{10}, H_2SO_4 and VOC. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) through (20) above. The following determinations have been made for each pollutant:

PE/PM_{10}-Burning natural gas in an efficient combustion turbine. For this permit, it is assumed that all PE emissions are PM_{10}.

NOx- Use of DLN burners and employment of SCR with a controlled emissions rate of 3.0 ppmvd at 15% oxygen, based on a 3-hour block averaging period.

CO- Use of oxidation catalyst with an emissions rate of 2.0 ppmvd at 15% oxygen without duct firing or use of power augmentation at greater than 75% load and 10 ppmvd at 15% oxygen with duct firing and use of power augmentation including operational periods of 60 - 75% load, based on a 24-hour block averaging period.

VOC- Combustion controls and use of an oxidation catalyst.

SO_2- Burning natural gas in an efficient combustion turbine and burning low sulfur

fuel.

H_2SO_4-Burning natural gas in an efficient combustion turbine.

2.f Upon promulgation, the permittee shall comply with the requirements of 40 CFR Part 60, Subpart KKKK, Standards of Performance for Stationary Combustion Turbines.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 standard cubic feet.

2. The permittee shall be limited to 1199 hours of operation per year for startups and shutdowns for this emissions unit.

3. As specified in the permittee's PTI application, the maximum heat input rating of this emissions unit is 2830 MM Btu/hr. This value corresponds to a maximum natural gas fuel flow of 2.830 million scf/hr, with a lower heat value of 1000 MMBtu/million scf. The permittee shall operate this emissions unit within the parameters specified above, except for startup* and shutdown. Start-up and shut-down periods shall be defined as any time the unit is operating at less than 60 % load. A cold startup is one that occurs more than 12 hours after shutdown. A hot startup is one that occurs 12 hours or less after shutdown. Typically, cold startup periods will be 4.0 hours in duration and hot startup periods 2.0 hours in duration, and shut-down periods 1.0 hour in duration. Each startup and shutdown shall be limited to the following:

Pollutant	lbs/cold startup	lbs/hot startup	lbs/shutdown
NOx	497	256	79
CO	1777	935	565
VOC	163	87	80

*Startup for testing purposes shall be defined as the date when emission unit P001 is set in operation for any purpose.

4. The SCR system shall be in operation at all times, except for periods of startup and shutdown, defined as any time unit is operating at less than 60% load.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for this emissions unit:

a. number and duration of each cold and hot start-up;
b. number and duration of each shut-down; and
c. the start-up and shut-down emissions* for NOx, CO, and VOC in tons per month.

* The start-up and shut-down emissions shall be based on CEM data, if available. If CEM data is not available, the emissions for each start-up and shut-down shall be based on the pound per event values specified in Section A.II.3, prorated by the actual duration of the event, as recorded per Section A.III.3 below.

2. The permittee shall maintain monthly records of the following information for this emissions unit:

a. the natural gas usage rate for each month (in standard cubic feet);
b. the hours of operation for the combustion turbine;
c. the hours of operation for the duct burner;
d. the monthly emissions for PE/PM_{10}, NOx, SO2, CO, VOC, formaldehyde, ammonia, and H_2SO_4, in tons; and
e. the rolling, 12-month summation of the emissions for PE/PM_{10}, NOx, SO2, CO, VOC, and H_2SO_4 (including start-up and shut-down emissions), in tons.

At the end of each year the permittee shall calculate the annual emissions from each of the pollutants above, in order to fulfill annual reporting requirements.

3. The permittee shall maintain records of the duration of each start-up and shut-down if continuous emissions monitoring system (CEMS) data is not available to document the duration of each event as required in Section A.III.1.

4. The permittee shall install, operate, maintain and certify continuous emissions monitoring system (CEMS) and continuous emissions rate monitoring system (CERMS) equipment to continuously monitor and record NO_x* ,CO, and O_2 from this emissions unit in the units of the standards established in this permit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and 40 CFR Part 75, or as approved in writing by the Ohio EPA, Central Office for this emissions unit.

The permittee shall maintain records of all data obtained by the continuous NO_x, CO, and O_2 monitoring systems including, but not limited to: results of daily zero/span calibration checks; magnitude of manual calibration adjustments; parts per million NO_x, CO, and per cent O_2 on an instantaneous (one-minute) basis; and emissions of NO_x and CO in pounds per million Btu and pounds per hour, in one-hour averages.

In conjunction with the operation of the NOx and CO CEMS and CERMS, the permittee shall install, operate and maintain a system to monitor when the duct burners are being fired. The data measured by this system shall be compiled with the data recorded by the NOx and CO

CEMS and CERMS.

* The installation and operation of systems to continuously monitor and record emissions of NOx may be performed in lieu of monitoring the nitrogen content of the fuels being fired in the turbine, as required by 40 CFR 60.334(b).

5. The permittee shall install, operate, maintain and certify equipment to continuously monitor and record the actual fuel flow to the turbine and duct burner when the turbine is in operation. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75. If the fuel flow monitoring and/or recording equipment is (are) not in service when the emissions unit is in operation, the permittee shall comply with the appropriate missing data procedures specified in 40 CFR Part 75, Subparts D and E. The permittee shall maintain an information management system for this emissions unit capable of monitoring and recording the fuel flow (million cubic feet) to the turbine and to the duct burner, hours of operation with duct burner firing, and hours of operation without duct burner firing.

6. The permittee shall maintain documentation on the sulfur contents and heating values of the fuel received. ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels. The permittee shall determine the heat value of the fuel using ASTM method D240. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Ohio EPA. The newest or most recent revisions to the applicable test method shall be used for these analyses. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.

7. The permittee shall determine the hourly heat input rate to the combustion turbine and duct burner from the fuel flow rate as determined in term Section A.III.5, and gross calorific value as determined in term A.III.6. The heat input rate shall be calculated in accordance with the procedures in 40 CFR Part 75, Appendix F, Section 5.

8. Initial compliance with the permit limits shall be demonstrated through the testing requirements found in Section A.V.1. On-going compliance with permit limits for NOx and CO will be demonstrated with CEMS/CERMS, and associated recordkeeping.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emission unit. Each report shall be submitted within 30 days after the deviation occurred.

2. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC Sections 3704.03(I) and 3704.03(l) and 40 CFR Part 60.7 and 60.13 (h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Portsmouth Local Air Agency (or regulating agency) documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NOx or CO values, as recorded by the CEMS, in excess of the applicable limits specified in the terms and conditions of this permit. These reports shall also contain the total NOx and CO emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Portsmouth Local Air Agency (or regulating agency) documenting any continuous NOx, CO, or O_2 monitoring system down time while the emission unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emission unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emission unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer, while the emission unit was on line, shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emission unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emission unit and the total operating time of the analyzer while the emission unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC Sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Portsmouth Local Air Agency (or regulating agency) within 30 days following the end of each calendar quarter in a manner prescribed by the Director

3. The permittee shall submit quarterly deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per 100 standard cubic feet. These reports are due by the date described in Part I - General Terms and Conditions of this permit under Section (A)(2).

4. The permittee shall submit annual deviation (excursion) reports, by February 1 of each year, that identify any exceedance of the restriction on the hours of startup and shutdowns for this

emissions unit (1199 hours).

5. The permittee shall submit quarterly deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the start-up/shut-down restrictions specified under Section II.3, or when records were not maintained as required in Sections A.III.1 and A.III.3. These reports are due by the date described in Part I - General Terms and Conditions of this permit.

6. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess emissions reports for this emissions unit in accordance with this permit. These reports are due by the date described in Part I - General Terms and Conditions of this permit.

7. This emission unit is subject to the applicable provisions of Subpart Da and GG of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency in 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, the permittee is hereby advised of the requirement to report the following at the appropriate times:

a. construction date (no later than 30 days after such date);

b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);

c. actual start-up date (within 15 days after such date); and,

d. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to :

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P.O. Box 163669
Columbus, Ohio 43216-3669

and

Portsmouth Local Air Agency
605 Washington Street, Third Floor
Portsmouth, Ohio 45662

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emission unit in accordance with the following requirements:

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emission unit will be operated, but not later than 180 days after initial startup of such emission unit.

b. The emission testing shall be conducted to demonstrate compliance with the NOx and CO outlet concentrations; the mass emission limitations for NOx*, CO, Formaldehyde, VOC, $PE/PM_{10,}$ and ammonia; and the pound per million Btu for PE/PM_{10} and VOC.

c. The following test method(s) shall be employed to demonstrate compliance with the above emission limitations: for NOx, Method 20 of 40 CFR Part 60, Appendix A; for PE/PM_{10}, Methods 201 and 202 of 40 CFR Part 60, Appendix A; for Formaldehyde, SW-846 Method 0011or EPA Method 316; for VOC, Method 25 of 40 CFR Part 60, Appendix A; for CO Method 10 of 40 CFR Part 60, Appendix A; and for ammonia, CTM-027. Alternative USEPA approved test methods may be used with prior approval from the Ohio EPA.

d. The testing shall be conducted while the emission unit is operating at or near its maximum capacity with and without duct burner firing and with power augmentation, unless otherwise specified or approved by Ohio EPA Central Office or Portsmouth Local Air Agency.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency (or regulating agency). The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emission unit operating parameters, the times(s) and date(s) of the test(s), and the person(s) who will be conducting these test(s). Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA Central Office or Portsmouth Local Air Agency's refusal to accept the results of the emission test(s).

f. Personnel from Portsmouth Local Air Agency (or regulating agency) shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emission test(s) shall be signed by

the person or persons responsible for the tests and submitted to the Portsmouth Local Air Agency (or regulating agency) within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth Local Air Agency (or regulating agency).

In lieu of the test methods and procedures required under 40 CFR Part 60.335, the permittee shall follow the testing requirements in accordance with this permit.

2. Within 60 days after achieving the maximum production rate at which the emission unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of the continuous NOx, CO and O2 monitoring systems pursuant to ORC Section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 2, 3, 4, 6* and 40 CFR Part 75, unless an extension is granted by the Ohio EPA. Personnel from the Portsmouth Local Air Agency and Ohio EPA Central Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, copies of all test results shall be submitted within 30 days after the test is completed. Copies of the test results shall be sent to the Portsmouth Local Air Agency (or regulating agency) and the Ohio EPA, Central Office. Certification of the continuous NOx, CO and O_2 CEMS/CERMS shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of the appropriate Sections of ORC Section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 2, 3, 4 and 6* and 40 CFR Part 75.

* The permittee may use certified NOx CEMS in conjunction with a fuel flow monitor as described in 40 CFR Part 75, and a certified CO CEMS in conjunction with a fuel flow monitor (in a manner similar to that used for NOx) to meet these requirements. The relative accuracy requirements of Performance Specification 6 shall apply in either case.

3. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

NOx emissions shall not exceed:
3.0 ppmvd at 15% Oxygen, based on a 3-hour block averaging period
24.1 lbs/hr without duct burner firing
30.5 lbs/hr with duct burner firing
182.8 tons based on a 12 month rolling summation, which includes 67.5 tons for startups and shutdowns.

Applicable Compliance Method:

Initial compliance with the allowable outlet concentrations and the pound per hour

emission limitations shall be demonstrated by the performance testing as described in Section A.V.1, and continual compliance with those limitations shall be demonstrated by the use of the CEMS and CERMS, as required in Section A.III.4. Monthly emissions shall be determined by the adding the hourly CERMS data at the end of each month. If at any time during the month the CERMS data is not available, the hours of start-up/shutdown emissions shall be determined as required in Section A.III.3 and the daily average CERMS data for the mode of operations (power augmentation, with or without duct burners etc.) will be added in place of the CERMS actual hourly average. At the end of each month the monthly emissions (required in Sections A.III.1 and A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

b. Emission Limitation:

Particulate emissions shall not exceed:
12.7 lbs/hr without duct burner firing
0.0096 lb/MMBtu without duct burner firing
25.3 lbs/hr with duct burner firing
0.0101 lb/MMBtu with duct burner firing
110.8 tons, based on a 12 month rolling summation

Applicable Compliance Method:

Compliance with the pound per hour and pound per MMBtu emission limitations shall be demonstrated by the performance testing in Section A.V.1. Monthly emissions shall be calculated by multiplying the hourly emissions rate, determined from the most recent stack test conducted to demonstrate compliance, by the actual annual hours of operation, as recorded in Section A.III.2. At the end of each month the monthly emissions (required in Section A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

c. Emission Limitation:

SO2 emissions shall not exceed:
11.9 lbs/hr without duct burner firing
16.1 lbs/hr with duct burner firing
0.0057 lb/MMBtu with and without duct burner firing
70.5 tons, based on a 12 month rolling summation.

Applicable Compliance Methods:

Compliance with the pound per hour and pound per MMBtu emission limitations shall be demonstrated by the recordkeeping required in Sections A.III.2, A.III.5, and A.III.6. Monthly emissions shall be calculated by multiplying the hourly emissions rate, by the actual annual hours of operation, as recorded in Section A.III.2. If required, compliance shall be demonstrated in accordance with the Method 6 of 40 CFR Part 60, Appendix A. At the end of each month the monthly emissions (required in Section A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

d. Emission Limitation:

VOC emissions shall not exceed
4.2 lbs/hr without duct burner firing
0.003 lb/MMBtu without duct burner firing
30.7 lbs/hr with duct burner firing
0.0118 lb/MMBtu with duct burner firing
148.5 tons, based on a 12 month rolling summation, which includes 32.9 tons for startups and shutdowns.

Applicable Compliance Method:

Initial compliance with the pound per hour and pounds per MMBtu emission limitations shall be demonstrated by the performance testing as described in Section A.V.1. Monthly emissions shall be determined by multiplying the hourly emissions rate, as determined from the most recent stack test conducted to demonstrate compliance, by the actual hours of operation, as recorded in Section A.III.2, and adding the start-up/shutdown emissions, calculated from and maintained as required in Sections A.III.1 and A.III.3. At the end of each month the monthly emissions (required in Sections A.III.1 and A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

e. Emission Limitation:

CO emissions shall not exceed
2 ppmvd at 15 % oxygen when the turbine load is at or above 75% without duct burner firing or the use of power augmentation, based on a 24-hour block averaging period
10 ppmvd at 15 % oxygen without duct burner firing but with the use of power augmentation or when the turbine load is below 75%, based on a 24-hour block averaging period
10 ppmvd at 15% oxygen with duct burner firing, based on a 24-hour block averaging period
9.8 lbs/hr when the turbine load is at or above 75% without duct burner firing or the use of power augmentation

32.4 lbs/hr without duct burner firing but with the use of power augmentation or when the turbine load is below 75%
61.9 lbs/hr with duct burner firing and/or use of power augmentation
529.8 tons based on a 12 month rolling summation, which includes 298.8 tons for startups and shutdowns.
295.8 tons for startups and shutdowns, based on a 12 month rolling summation

Applicable Compliance Method:

Initial compliance with the allowable outlet concentrations and the pound per hour emission limitations shall be demonstrated by the performance testing as described in Section A.V.1, and continual compliance with those limitations shall be demonstrated by the use of the CEMS and CERMS, as required in Section A.III.4. Monthly emissions shall be determined by the adding the hourly CERMS data at the end of each month. If at any time during the month the CERMS data is not available, the hours of start-up/shutdown emissions shall be determined as required in Section A.III.3 and the daily average CERMS data for the mode of operations (power augmentation, with or without duct burners etc.) will be added in place of the CERMS actual hourly average. At the end of each month the monthly emissions (required in Sections A.III.1 and A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

f. Emission Limitation:

ammonia (NH3) emissions shall not exceed
27.3 lbs/hr without duct burner firing
37.7 lbs/hr with duct burner firing
165.1 tons per year

Applicable Compliance Method:

Compliance with the pound per hour emission limitations shall be demonstrated by the performance testing in Section A.V.1. Monthly emissions shall be calculated by multiplying the hourly emissions rate, determined from the most recent stack test conducted to demonstrate compliance, by the actual annual hours of operation, as recorded in Section A.III.2. Compliance with the annual emission limitation shall be demonstrated at the end of each year by adding the monthly records maintained in Section A.III.2.

g. Emission Limitation:

Formaldehyde emission shall not exceed
0.75 lb/hr without duct burner firing
1.02 lbs/hr with duct burner firing
4.47 TPY

Applicable Compliance Method:

Compliance with the pound per hour emission limitations shall be demonstrated by the performance testing in Section A.V.1. Monthly emissions shall be calculated by multiplying the hourly emissions rate, determined from the most recent stack test conducted to demonstrate compliance, by the actual annual hours of operation, as recorded in Section A.III.2. Compliance with the annual emission limitation shall be demonstrated at the end of each year by adding the monthly records maintained in Section A.III.2.

h. Emission Limitation:

Sulfuric acid (H2SO4) emissions shall not exceed
0.5 lb/hr without duct burner firing
0.7 lb/hr with duct burner firing
3.1 tons based on a 12 month rolling summation
0.00026 lb/MMBtu with and without duct burner firing

Applicable Compliance Method:

Compliance with the pound per hour and pounds per MMBtu emission limitations shall be demonstrated by the recordkeeping required in Sections A.III.2, A.III.5, and A.III.6 for the pollutant SO_2. Based on testing of similar sources, approximately 3% of the SO_2 emissions are converted to sulfuric acid. Monthly emissions shall be calculated by the multiplying the hourly emissions rate determined for SO_2 by 3%, and this hourly rate by the actual annual hours of operation, as recorded in Section A.III.2. At the end of each month the monthly emissions (required in Section A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

i. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six minute average.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in OAC rule 3745-17-03(B)(1) determined according to Method 9 of 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

1. In accordance with good engineering practices, the SCR unit on emissions unit P001 shall be installed, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall maintain on site a copy of the operation & maintenance manual, as provided by the manufacturer.

2. Prior to the installation of the continuous NO_x and CO monitoring systems, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2, 4 and 6* (or as described in condition A.V.1.) for approval by the Ohio EPA, Central Office.

* for Performance Specification 6 see Section V.2.

3. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NOx, CO, and O_2 monitoring system designed to ensure continuous valid and representative readings of NOx, CO, and O_2 emissions in units of the applicable standard. The plan shall follow the requirements of the appropriate Sections of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B, or as

approved by the Ohio EPA, Central Office. The quality assurance/quality control plan and logbook dedicated to the continuous NOx, CO, and O_2 monitoring system must be kept on site and available for inspection during regular office hours.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P001 - 180 MW Westinghouse 501F natural gas fired combustion turbine No 1 with duct firing operating in combined cycle mode with selective catalytic reduction (SCR) and oxidation catalyst	None	Compliance with OEPA Air Toxic Policy; See Part II. Section B.

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements
P002 - 180 MW Westinghouse 501F natural gas fired combustion turbine No 2 with duct firing operating in combined cycle mode controlled by selective catalytic reduction (SCR) and oxidation catalyst	OAC rule 3745-31-(10) through (20)

		40 CFR part 60, Subpart GG
		40 CFR part 60, Subpart Da
		OAC rule 3745-18-06(F)
	OAC rule 3745-31-05(A)(3)	
		OAC rule 3745-17-11(B)(4)
		OAC rule 3745-17-07(A)
		40 CFR Parts 72, 73, 74, 75 and 76
		OAC rule 3745-103
		40 CFR Part 60 Subpart KKKK

Applicable Emissions Limitations/Control Measures		
EMISSION LIMITS WITHOUT DUCT BURNER FIRING: Nitrogen oxides (NO_x) emissions shall not exceed 3.0 ppmvd at 15% Oxygen, based on a 3-hour block averaging period. NOx emissions shall not exceed 24.1 lbs/hr. Particulate emissions (PE/PM_{10}*) shall not exceed 0.0096 lb/MMBtu and 12.7 lbs/hr. Sulfur dioxide (SO_2) emissions shall not exceed 0.0057 lb/MMBtu and 11.9 lbs/hr. Carbon monoxide (CO) emissions shall not exceed the following, based on a 24-hour block averaging period: 2.0 ppmvd at 15% oxygen (when turbine load is at or above 75% without power augmentation) 10 ppmv at 15% oxygen (with power augmentation or when turbine load is below 75%)	CO emissions shall not exceed 9.8 lbs/hr when turbine load is at or above 75 % without power augmentation or 32.4 lbs/hr with power augmentation** or when turbine load is below 75% Volatile organic compounds (VOC) emissions shall not exceed 0.003 lbs/MMBtu and 4.2 lbs/hr. Sulfuric acid (H_2SO_4) emissions shall not exceed 0.00026 lb/MMBtu and 0.5 lbs/hr. EMISSION LIMITS WITH DUCT BURNER FIRING: NO_x emissions shall not exceed 3.0 ppmvd at 15% Oxygen, based on a 3-hour block averaging period. NOx emissions shall not exceed 30.5 lbs/hr. Particulate emissions (PE/PM_{10}) shall not exceed 0.0101 lb/MMBtu and 25.3 lbs/hr. SO_2 emissions shall not exceed 0.0057 lb/MMBtu and 16.1 lbs/hr. CO emissions shall not exceed 10 ppmvd at 15% Oxygen, based on a 24-hour block averaging period. CO emissions shall not exceed 61.9 lbs/hr.	VOC emissions shall not exceed 0.0118 lb/MMBtu and 30.7 lbs/hr. H_2SO_4 emissions shall not exceed 0.00026 lb/MMBtu and 0.7 lbs/hr. STARTUP AND SHUTDOWN EMISSIONS (see Item A.II.3.): NO_x emissions shall not exceed 67.5 tons, based on a 12 month rolling average. CO emissions shall not exceed 295.8 tons, based on a 12 month rolling average. VOC emissions shall not exceed 32.4 tons, based on a 12 month rolling average. TOTAL TONS per rolling 12 months including startups and shutdowns: NO_x emissions shall not exceed 182.8 tons, based on a 12 month rolling average. SO_2 emissions shall not exceed 70.5 tons, based on a 12 month rolling average. PE/PM_{10} emissions shall not exceed 110.8 tons, based on a 12 month rolling average. CO emissions shall not exceed 529.8 tons, based on a 12 month rolling average. VOC emissions shall not exceed 148.5 tons, based on a 12 month rolling average.

H_2SO_4 emissions shall not exceed 3.1 tons, based on a 12 month rolling average.	Formaldehyde emissions shall not exceed 1.02 lbs/hr.
see Section A.I.2.e below.	see Sections A.I.2.b and A.III.6 below.
The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart Da and GG, OAC rule 3745-18-06(F), 3745-17-11(B)(4), OAC rule 3745-17-07(A), and OAC 3745-31-(10) thru (20).	see Section A.I.2.c below.
	see Section A.I.2.a below.
	see Section A.I.2.a below.
	see Section A.I.2.a below.
Visible particulate emissions shall not exceed 10 % opacity as a six minute average.	see Section A.I.2.d below.
	see Section A.I.2.d below.
Ammonia (NH_3) emissions shall not exceed 165.1 tpy.	see Section A.I.2.f below
Formaldehyde shall not exceed 4.47 tpy.	* all particulate emission are assumed to be PM_{10} ** power augmentation is when steam from the heat recovery steam generator is injected into the combustion turbine generator
EMISSION LIMITS WITHOUT DUCT BURNER FIRING:	
NH_3 emissions shall not exceed 27.3 lbs/hr.	
Formaldehyde emissions shall not exceed 0.75 lb/hr.	
EMISSION LIMITS WITH DUCT BURNER FIRING:	
NH_3 emissions shall not exceed 37.7 lbs/hr.	

2. Additional Terms and Conditions

2.a The emissions limit based on this applicable rule is equivalent to or less stringent than the limit established pursuant to OAC rule 3745-31-(10) through (20).

2.b The emissions limits based on this standard are less stringent than the limits established pursuant to OAC rule 3745-31-(10) thru (20). The limit contained in this permit is more stringent that the limit calculated per CFR 60.332 for nitrogen oxides, using the manufacturer's heat rate at the manufacturer's rated load for "Y". The SO_2 limit contained in this permit, 2 grains SO_2/100scf, is more restrictive than required per CFR 60.333. Except as provided for in the terms and conditions in this permit, the permittee is not exempt from meeting any additional requirements of 40 CFR Part 60, Subpart GG.

2.c The particulate and visible emissions limits contained in this permit are more stringent than the limits established pursuant to 40 CFR Part 60, Subpart Da, in 60.42(a) and 60.42(b) respectively. And the 30-day rolling average limits, established per CFR 60.43(b) for sulfur dioxide emissions and per CFR 60.44(a) for nitrogen oxide emissions, are less stringent than the emissions limits contained in this permit, which are also established as hourly limits.

2.d The permittee is subject to the applicable requirements of 40 CFR Parts 72, 73, 74, 75, and 76, concerning the acid rain program. Per 40 CFR 72.30(b)(2)(ii) and OAC 3745-103-07(A)(2)(b) and (c), an application for a Part 72 permit shall be submitted at least 24 months prior to commencing operations. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

2.e The permittee is required to perform Best Available Control Technology (BACT) review for NOx, SO_2, CO, PM_{10}, H_2SO_4 and VOC. The emissions limits based on the BACT requirements are listed under 40 CFR 52.21 and OAC rule 3745-31-(10) through (20) above. The following determinations have been made for each pollutant:

PE/PM_{10}-Burning natural gas in an efficient combustion turbine. For this permit, it is assumed that all PE emissions are PM_{10}.

NOx- Use of DLN burners and employment of SCR with a controlled emissions rate of 3.0 ppmvd at 15% oxygen, based on a 3-hour block averaging period.

CO- Use of oxidation catalyst with an emissions rate of 2.0 ppmvd at 15% oxygen without duct firing or use of power augmentation at greater than 75% load and 10 ppmvd at 15% oxygen with duct firing and use of power augmentation including operational periods of 60 - 75% load, based on a 24-hour block

averaging period.
VOC- Combustion controls and use of an oxidation catalyst.
SO_2- Burning natural gas in an efficient combustion turbine and burning low sulfur fuel.
H_2SO_4-Burning natural gas in an efficient combustion turbine.

2.f Upon promulgation, the permittee shall comply with the requirements of 40 CFR Part 60, Subpart KKKK, Standards of Performance for Stationary Combustion Turbines.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 standard cubic feet.

2. The permittee shall be limited to 1199 hours of operation per year for startups and shutdowns for this emissions unit.

3. As specified in the permittee's PTI application, the maximum heat input rating of this emissions unit is 2830 MM Btu/hr. This value corresponds to a maximum natural gas fuel flow of 2.830 million scf/hr, with a lower heat value of 1000 MMBtu/million scf. The permittee shall operate this emissions unit within the parameters specified above, except for startup* and shutdown. Start-up and shut-down periods shall be defined as any time the unit is operating at less than 60 % load. A cold startup is one that occurs more than 12 hours after shutdown. A hot startup is one that occurs 12 hours or less after shutdown. Typically, cold startup periods will be 4.0 hours in duration and hot startup periods 2.0 hours in duration, and shut-down periods 1.0 hour in duration. Each startup and shutdown shall be limited to the following:

Pollutant	lbs/cold startup	lbs/hot startup	lbs/shutdown
NOx	497	256	79
CO	1777	935	565
VOC	163	87	80

*Startup for testing purposes shall be defined as the date when emission unit P002 is set in operation for any purpose.

4. The SCR system shall be in operation at all times, except for periods of startup and shutdown, defined as any time unit is operating at less than 60% load.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for this emissions unit:

a. number and duration of each cold and hot start-up;
b. number and duration of each shut-down; and
c. the start-up and shut-down emissions* for NOx, CO, and VOC in tons per month.

* The start-up and shut-down emissions shall be based on CEM data, if available. If CEM data is not available, the emissions for each start-up and shut-down shall be based on the pound per event values specified in Section A.II.3, prorated by the actual duration of the event, as recorded per Section A.III.3 below.

2. The permittee shall maintain monthly records of the following information for this emissions unit:

a. the natural gas usage rate for each month (in standard cubic feet);
b. the hours of operation for the combustion turbine;
c. the hours of operation for the duct burner;
d. the monthly emissions for PE/PM_{10}, NOx, SO2, CO, VOC, formaldehyde, ammonia, and H_2SO_4, in tons; and
e. the rolling, 12-month summation of the emissions for PE/PM_{10}, NOx, SO2, CO, VOC, and H_2SO_4 (including start-up and shut-down emissions), in tons.

At the end of each year the permittee shall calculate the annual emissions from each of the pollutants above, in order to fulfill annual reporting requirements.

3. The permittee shall maintain records of the duration of each start-up and shut-down if continuous emissions monitoring system (CEMS) data is not available to document the duration of each event as required in Section A.III.1.

4. The permittee shall install, operate, maintain and certify continuous emissions monitoring system (CEMS) and continuous emissions rate monitoring system (CERMS) equipment to continuously monitor and record NO_x* ,CO, and O_2 from this emissions unit in the units of the standards established in this permit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and 40 CFR Part 75, or as approved in writing by the Ohio EPA, Central Office for this emissions unit.

The permittee shall maintain records of all data obtained by the continuous NO_x, CO, and O_2 monitoring systems including, but not limited to: results of daily zero/span calibration checks; magnitude of manual calibration adjustments; parts per million NO_x, CO, and per cent O_2 on an instantaneous (one-minute) basis; and emissions of NO_x and CO in pounds per million Btu and pounds per hour, in one-hour averages.

In conjunction with the operation of the NOx and CO CEMS and CERMS, the permittee shall install, operate and maintain a system to monitor when the duct burners are being fired. The data measured by this system shall be compiled with the data recorded by the NOx and CO CEMS and CERMS.

* The installation and operation of systems to continuously monitor and record emissions of NOx may be performed in lieu of monitoring the nitrogen content of the fuels being fired in the turbine, as required by 40 CFR 60.334(b).

5. The permittee shall install, operate, maintain and certify equipment to continuously monitor and record the actual fuel flow to the turbine and duct burner when the turbine is in operation. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75. If the fuel flow monitoring and/or recording equipment is (are) not in service when the emissions unit is in operation, the permittee shall comply with the appropriate missing data procedures specified in 40 CFR Part 75, Subparts D and E. The permittee shall maintain an information management system for this emissions unit capable of monitoring and recording the fuel flow (million cubic feet) to the turbine and to the duct burner, hours of operation with duct burner firing, and hours of operation without duct burner firing.

6. The permittee shall maintain documentation on the sulfur contents and heating values of the fuel received. ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels. The permittee shall determine the heat value of the fuel using ASTM method D240. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Ohio EPA. The newest or most recent revisions to the applicable test method shall be used for these analyses. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.

7. The permittee shall determine the hourly heat input rate to the combustion turbine and duct burner from the fuel flow rate as determined in term Section A.III.5, and gross calorific value as determined in term A.III.6. The heat input rate shall be calculated in accordance with the procedures in 40 CFR Part 75, Appendix F, Section 5.

8. Initial compliance with the permit limits shall be demonstrated through the testing requirements found in Section A.V.1. On-going compliance with permit limits for NOx and CO will be demonstrated with CEMS/CERMS, and associated recordkeeping.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emission unit. Each report shall be submitted within 30 days after the deviation occurred.

2. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC Sections 3704.03(I) and 3704.03(l) and 40 CFR Part 60.7 and 60.13 (h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Portsmouth Local Air Agency (or regulating agency) documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NOx or CO values, as recorded by the CEMS, in excess of the applicable limits specified in the terms and conditions of this permit. These reports shall also contain the total NOx and CO emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Portsmouth Local Air Agency (or regulating agency) documenting any continuous NOx, CO, or O_2 monitoring system down time while the emission unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emission unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emission unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer, while the emission unit was on line, shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emission unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emission unit and the total operating time of the analyzer while the emission unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC Sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Portsmouth Local Air Agency (or regulating agency) within 30 days following the end of each calendar quarter in a manner prescribed by the Director

3. The permittee shall submit quarterly deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per 100 standard cubic feet. These reports are due by the date described in Part I - General Terms and Conditions of this permit under Section (A)(2).

4. The permittee shall submit annual deviation (excursion) reports, by February 1 of each year, that identify any exceedance of the restriction on the hours of startup and shutdowns for this emissions unit (1199 hours).

5. The permittee shall submit quarterly deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the start-up/shut-down restrictions specified under Section II.3, or when records were not maintained as required in Sections A.III.1 and A.III.3. These reports are due by the date described in Part I - General Terms and Conditions of this permit.

6. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess emissions reports for this emissions unit in accordance with this permit. These reports are due by the date described in Part I - General Terms and Conditions of this permit.

7. This emission unit is subject to the applicable provisions of Subpart Da and GG of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency in 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, the permittee is hereby advised of the requirement to report the following at the appropriate times:

a. construction date (no later than 30 days after such date);

b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);

c. actual start-up date (within 15 days after such date); and,

d. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to :

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P.O. Box 163669
Columbus, Ohio 43216-3669

and

Portsmouth Local Air Agency
605 Washington Street, Third Floor

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emission unit in accordance with the following requirements:

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emission unit will be operated, but not later than 180 days after initial startup of such emission unit.

b. The emission testing shall be conducted to demonstrate compliance with the NOx and CO outlet concentrations; the mass emission limitations for NOx*, CO, Formaldehyde, VOC, PE/PM_{10}, and ammonia; and the pound per million Btu for PE/PM_{10} and VOC.

c. The following test method(s) shall be employed to demonstrate compliance with the above emission limitations: for NOx, Method 20 of 40 CFR Part 60, Appendix A; for PE/PM_{10}, Methods 201 and 202 of 40 CFR Part 60, Appendix A; for Formaldehyde, SW-846 Method 0011or EPA Method 316; for VOC, Method 25 of 40 CFR Part 60, Appendix A; for CO Method 10 of 40 CFR Part 60, Appendix A; and for ammonia, CTM-027. Alternative USEPA approved test methods may be used with prior approval from the Ohio EPA.

d. The testing shall be conducted while the emission unit is operating at or near its maximum capacity with and without duct burner firing and with power augmentation, unless otherwise specified or approved by Ohio EPA Central Office or Portsmouth Local Air Agency.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency (or regulating agency). The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emission unit operating parameters, the times(s) and date(s) of the test(s), and the person(s) who will be conducting these test(s). Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA Central Office or Portsmouth Local Air Agency's refusal to accept the results of the emission test(s).

f. Personnel from Portsmouth Local Air Agency (or regulating agency) shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit

and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth Local Air Agency (or regulating agency) within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth Local Air Agency (or regulating agency).

In lieu of the test methods and procedures required under 40 CFR Part 60.335, the permittee shall follow the testing requirements in accordance with this permit.

2. Within 60 days after achieving the maximum production rate at which the emission unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of the continuous NOx, CO and O2 monitoring systems pursuant to ORC Section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 2, 3, 4, 6* and 40 CFR Part 75, unless an extension is granted by the Ohio EPA. Personnel from the Portsmouth Local Air Agency and Ohio EPA Central Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, copies of all test results shall be submitted within 30 days after the test is completed. Copies of the test results shall be sent to the Portsmouth Local Air Agency (or regulating agency) and the Ohio EPA, Central Office. Certification of the continuous NOx, CO and O_2 CEMS/CERMS shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of the appropriate Sections of ORC Section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 2, 3, 4 and 6* and 40 CFR Part 75.

* The permittee may use certified NOx CEMS in conjunction with a fuel flow monitor as described in 40 CFR Part 75, and a certified CO CEMS in conjunction with a fuel flow monitor (in a manner similar to that used for NOx) to meet these requirements. The relative accuracy requirements of Performance Specification 6 shall apply in either case.

3. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

NOx emissions shall not exceed:
3.0 ppmvd at 15% Oxygen, based on a 3-hour block averaging period
24.1 lbs/hr without duct burner firing
30.5 lbs/hr with duct burner firing
182.8 tons based on a 12 month rolling summation, which includes 67.5 tons for startups and shutdowns.

Applicable Compliance Method:

Initial compliance with the allowable outlet concentrations and the pound per hour emission limitations shall be demonstrated by the performance testing as described in Section A.V.1, and continual compliance with those limitations shall be demonstrated by the use of the CEMS and CERMS, as required in Section A.III.4. Monthly emissions shall be determined by the adding the hourly CERMS data at the end of each month. If at any time during the month the CERMS data is not available, the hours of start-up/shutdown emissions shall be determined as required in Section A.III.3 and the daily average CERMS data for the mode of operations (power augmentation, with or without duct burners etc.) will be added in place of the CERMS actual hourly average. At the end of each month the monthly emissions (required in Sections A.III.1 and A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

b. Emission Limitation:

Particulate emissions shall not exceed:
12.7 lbs/hr without duct burner firing
0.0096 lb/MMBtu without duct burner firing
25.3 lbs/hr with duct burner firing
0.0101 lb/MMBtu with duct burner firing
110.8 tons, based on a 12 month rolling summation

Applicable Compliance Method:

Compliance with the pound per hour and pound per MMBtu emission limitations shall be demonstrated by the performance testing in Section A.V.1. Monthly emissions shall be calculated by multiplying the hourly emissions rate, determined from the most recent stack test conducted to demonstrate compliance, by the actual annual hours of operation, as recorded in Section A.III.2. At the end of each month the monthly emissions (required in Section A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

c. Emission Limitation:

SO2 emissions shall not exceed:
11.9 lbs/hr without duct burner firing
16.1 lbs/hr with duct burner firing
0.0057 lb/MMBtu with and without duct burner firing
70.5 tons, based on a 12 month rolling summation.

Applicable Compliance Methods:

Compliance with the pound per hour and pound per MMBtu emission limitations shall be demonstrated by the recordkeeping required in Sections A.III.2, A.III.5, and A.III.6. Monthly emissions shall be calculated by multiplying the hourly emissions rate, by the actual annual hours of operation, as recorded in Section A.III.2. If required, compliance shall be demonstrated in accordance with the Method 6 of 40 CFR Part 60, Appendix A. At the end of each month the monthly emissions (required in Section A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

d. Emission Limitation:

VOC emissions shall not exceed
4.2 lbs/hr without duct burner firing
0.003 lb/MMBtu without duct burner firing
30.7 lbs/hr with duct burner firing
0.0118 lb/MMBtu with duct burner firing
148.5 tons, based on a 12 month rolling summation, which includes 32.9 tons for startups and shutdowns.

Applicable Compliance Method:

Initial compliance with the pound per hour and pounds per MMBtu emission limitations shall be demonstrated by the performance testing as described in Section A.V.1. Monthly emissions shall be determined by multiplying the hourly emissions rate, as determined from the most recent stack test conducted to demonstrate compliance, by the actual hours of operation, as recorded in Section A.III.2, and adding the start-up/shutdown emissions, calculated from and maintained as required in Sections A.III.1 and A.III.3. At the end of each month the monthly emissions (required in Sections A.III.1 and A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

e. Emission Limitation:

CO emissions shall not exceed
2 ppmvd at 15 % oxygen when the turbine load is at or above 75% without duct burner firing or the use of power augmentation, based on a 24-hour block averaging period
10 ppmvd at 15 % oxygen without duct burner firing but with the use of power augmentation or when the turbine load is below 75%, based on a 24-hour block averaging period
10 ppmvd at 15% oxygen with duct burner firing, based on a 24-hour block averaging

period
9.8 lbs/hr when the turbine load is at or above 75% without duct burner firing or the use of power augmentation
32.4 lbs/hr without duct burner firing but with the use of power augmentation or when the turbine load is below 75%
61.9 lbs/hr with duct burner firing and/or use of power augmentation
529.8 tons based on a 12 month rolling summation, which includes 298.8 tons for startups and shutdowns.
295.8 tons for startups and shutdowns, based on a 12 month rolling summation

Applicable Compliance Method:

Initial compliance with the allowable outlet concentrations and the pound per hour emission limitations shall be demonstrated by the performance testing as described in Section A.V.1, and continual compliance with those limitations shall be demonstrated by the use of the CEMS and CERMS, as required in Section A.III.4. Monthly emissions shall be determined by the adding the hourly CERMS data at the end of each month. If at any time during the month the CERMS data is not available, the hours of start-up/shutdown emissions shall be determined as required in Section A.III.3 and the daily average CERMS data for the mode of operations (power augmentation, with or without duct burners etc.) will be added in place of the CERMS actual hourly average. At the end of each month the monthly emissions (required in Sections A.III.1 and A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

f. Emission Limitation:

ammonia (NH3) emissions shall not exceed
27.3 lbs/hr without duct burner firing
37.7 lbs/hr with duct burner firing
165.1 tons per year

Applicable Compliance Method:

Compliance with the pound per hour emission limitations shall be demonstrated by the performance testing in Section A.V.1. Monthly emissions shall be calculated by multiplying the hourly emissions rate, determined from the most recent stack test conducted to demonstrate compliance, by the actual annual hours of operation, as recorded in Section A.III.2. Compliance with the annual emission limitation shall be demonstrated at the end of each year by adding the monthly records maintained in Section A.III.2.

g. Emission Limitation:

Formaldehyde emission shall not exceed
0.75 lb/hr without duct burner firing
1.02 lbs/hr with duct burner firing
4.47 TPY

Applicable Compliance Method:

Compliance with the pound per hour emission limitations shall be demonstrated by the performance testing in Section A.V.1. Monthly emissions shall be calculated by multiplying the hourly emissions rate, determined from the most recent stack test conducted to demonstrate compliance, by the actual annual hours of operation, as recorded in Section A.III.2. Compliance with the annual emission limitation shall be demonstrated at the end of each year by adding the monthly records maintained in Section A.III.2.

h. Emission Limitation:

Sulfuric acid (H2SO4) emissions shall not exceed
0.5 lb/hr without duct burner firing
0.7 lb/hr with duct burner firing
3.1 tons based on a 12 month rolling summation
0.00026 lb/MMBtu with and without duct burner firing

Applicable Compliance Method:

Compliance with the pound per hour and pounds per MMBtu emission limitations shall be demonstrated by the recordkeeping required in Sections A.III.2, A.III.5, and A.III.6 for the pollutant SO_2. Based on testing of similar sources, approximately 3% of the SO_2 emissions are converted to sulfuric acid. Monthly emissions shall be calculated by the multiplying the hourly emissions rate determined for SO_2 by 3%, and this hourly rate by the actual annual hours of operation, as recorded in Section A.III.2. At the end of each month the monthly emissions (required in Section A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

i. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six minute average.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in OAC rule 3745-17-03(B)(1) determined according to Method 9 of 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

1. In accordance with good engineering practices, the SCR unit on emissions unit P001 shall be installed, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall maintain on site a copy of the operation & maintenance manual, as provided by the manufacturer.

2. Prior to the installation of the continuous NO_x and CO monitoring systems, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2, 4 and 6* (or as described in condition A.V.1.) for approval by the Ohio EPA, Central Office.

* for Performance Specification 6 see Section V.2.

3. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NOx, CO, and O_2 monitoring system designed to ensure continuous valid and representative readings of NOx, CO, and O_2 emissions in units of the applicable standard. The plan shall follow the requirements of the appropriate Sections of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B, or as

approved by the Ohio EPA, Central Office. The quality assurance/quality control plan and logbook dedicated to the continuous NOx, CO, and O_2 monitoring system must be kept on site and available for inspection during regular office hours.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P002 - 180 MW Westinghouse 501F natural gas fired combustion turbine No 2 with duct firing operating in combined cycle mode controlled by selective catalytic reduction (SCR) and oxidation catalyst	None	Compliance with OEPA Air Toxic Policy; See Part II. Section B.

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements
P003 - 180 MW Westinghouse 501F natural gas fired combustion turbine No 3 with duct firing during combined cycle mode controlled by selective catalytic reduction (SCR) and oxidation catalyst	OAC rule 3745-31-(10) through (20)

		40 CFR part 60, Subpart GG
		40 CFR part 60, Subpart Da
		OAC rule 3745-18-06(F)
	OAC rule 3745-31-05(A)(3)	
		OAC rule 3745-17-11(B)(4)
		OAC rule 3745-17-07(A)
		40 CFR Parts 72, 73, 74, 75 and 76
		OAC rule 3745-103
		40 CFR Part 60 Subpart KKKK

Applicable Emissions Limitations/Control Measures		
EMISSION LIMITS WITHOUT DUCT BURNER FIRING: Nitrogen oxides (NO_x) emissions shall not exceed 3.0 ppmvd at 15% Oxygen, based on a 3-hour block averaging period. NOx emissions shall not exceed 24.1 lbs/hr. Particulate emissions (PE/PM_{10}*) shall not exceed 0.0096 lb/MMBtu and 12.7 lbs/hr. Sulfur dioxide (SO_2) emissions shall not exceed 0.0057 lb/MMBtu and 11.9 lbs/hr. Carbon monoxide (CO) emissions shall not exceed the following, based on a 24-hour block averaging period: 2.0 ppmvd at 15% oxygen (when turbine load is at or above 75% without power augmentation) 10 ppmv at 15% oxygen (with power augmentation or when turbine load is below 75%)	CO emissions shall not exceed 9.8 lbs/hr when turbine load is at or above 75 % without power augmentation or 32.4 lbs/hr with power augmentation** or when turbine load is below 75% Volatile organic compounds (VOC) emissions shall not exceed 0.003 lb/MMBtu and 4.2 lbs/hr. Sulfuric acid (H_2SO_4) emissions shall not exceed 0.00026 lb/MMBtu and 0.5 lbs/hr. EMISSION LIMITS WITH DUCT BURNER FIRING: NO_x emissions shall not exceed 3.0 ppmvd at 15% Oxygen, based on a 3-hour block averaging period. NOx emissions shall not exceed 30.5 lbs/hr. Particulate emissions (PE/PM_{10}) shall not exceed 0.0101 lb/MMBtu and 25.3 lbs/hr. SO_2 emissions shall not exceed 0.0057 lb/MMBtu and 16.1 lbs/hr. CO emissions shall not exceed 10 ppmvd at 15% Oxygen, based on a 24-hour block averaging period. CO emissions shall not exceed 61.9 lbs/hr.	VOC emissions shall not exceed 0.0118 lb/MMBtu and 30.7 lbs/hr. H_2SO_4 emissions shall not exceed 0.00026 lb/MMBtu and 0.7 lbs/hr. STARTUP AND SHUTDOWN EMISSIONS (see Item A.II.3.): NO_x emissions shall not exceed 67.5 tons, based on a 12 month rolling average. CO emissions shall not exceed 295.8 tons, based on a 12 month rolling average. VOC emissions shall not exceed 32.4 tons, based on a 12 month rolling average. TOTAL TONS per rolling 12 months including startups and shutdowns: NO_x emissions shall not exceed 182.8 tons, based on a 12 month rolling average. SO_2 emissions shall not exceed 70.5 tons, based on a 12 month rolling average. PE/PM_{10} emissions shall not exceed 110.8 tons, based on a 12 month rolling average. CO emissions shall not exceed 529.8 tons, based on a 12 month rolling average. VOC emissions shall not exceed 148.5 tons, based on a 12 month rolling average.

H_2SO_4 emissions shall not exceed 3.1 tons, based on a 12 month rolling average.	Formaldehyde emissions shall not exceed 1.02 lbs/hr.
see Section A.I.2.e below.	see Sections A.I.2.b and A.III.6 below.
The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart Da and GG, OAC rule 3745-18-06(F), 3745-17-11(B)(4), OAC rule 3745-17-07(A), and OAC 3745-31-(10) thru (20).	see Section A.I.2.c below.
	see Section A.I.2.a below.
	see Section A.I.2.a below.
	see Section A.I.2.a below.
	see Section A.I.2.d below.
Visible particulate emissions shall not exceed 10 % opacity as a six minute average.	see Section A.I.2.d below.
	see Section A.I.2.f below.
Ammonia (NH_3) emissions shall not exceed 165.1 tpy.	* all particulate emission are assumed to be PM_{10}
Formaldehyde shall not exceed 4.47 tpy.	** power augmentation is when steam from the heat recovery steam generator is injected into the combustion turbine generator
EMISSION LIMITS WITHOUT DUCT BURNER FIRING:	
NH_3 emissions shall not exceed 27.3 lbs/hr.	
Formaldehyde emissions shall not exceed 0.75 lb/hr.	
EMISSION LIMITS WITH DUCT BURNER FIRING:	
NH_3 emissions shall not exceed 37.7 lbs/hr.	

2. Additional Terms and Conditions

2.a The emissions limit based on this applicable rule is equivalent to or less stringent than the limit established pursuant to OAC rule 3745-31-(10) through (20).

2.b The emissions limits based on this standard are less stringent than the limits established pursuant to OAC rule 3745-31-(10) thru (20). The limit contained in this permit is more stringent that the limit calculated per CFR 60.332 for nitrogen oxides, using the manufacturer's heat rate at the manufacturer's rated load for "Y". The SO_2 limit contained in this permit, 2 grains SO_2/100scf, is more restrictive than required per CFR 60.333. Except as provided for in the terms and conditions in this permit, the permittee is not exempt from meeting any additional requirements of 40 CFR Part 60, Subpart GG.

2.c The particulate and visible emissions limits contained in this permit are more stringent than the limits established pursuant to 40 CFR Part 60, Subpart Da, in 60.42(a) and 60.42(b) respectively. And the 30-day rolling average limits, established per CFR 60.43(b) for sulfur dioxide emissions and per CFR 60.44(a) for nitrogen oxide emissions, are less stringent than the emissions limits contained in this permit, which are also established as hourly limits.

2.d The permittee is subject to the applicable requirements of 40 CFR Parts 72, 73, 74, 75, and 76, concerning the acid rain program. Per 40 CFR 72.30(b)(2)(ii) and OAC 3745-103-07(A)(2)(b) and (c), an application for a Part 72 permit shall be submitted at least 24 months prior to commencing operations. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

2.e The permittee is required to perform Best Available Control Technology (BACT) review for NOx, SO_2, CO, PM_{10}, H_2SO_4 and VOC. The emissions limits based on the BACT requirements are listed under 40 CFR 52.21 and OAC rule 3745-31-(10) through (20) above. The following determinations have been made for each pollutant:

PE/PM_{10}-Burning natural gas in an efficient combustion turbine. For this permit, it is assumed that all PE emissions are PM_{10}.

NOx- Use of DLN burners and employment of SCR with a controlled emissions rate of 3.0 ppmvd at 15% oxygen, based on a 3-hour block averaging period.

CO- Use of oxidation catalyst with an emissions rate of 2.0 ppmvd at 15% oxygen without duct firing or use of power augmentation at greater than 75% load and 10 ppmvd at 15% oxygen with duct firing and use of power augmentation including operational periods of 60 - 75% load, based on a 24-hour block

averaging period.
VOC- Combustion controls and use of an oxidation catalyst.
SO_2- Burning natural gas in an efficient combustion turbine and burning low sulfur fuel.
H_2SO_4-Burning natural gas in an efficient combustion turbine.

2.f Upon promulgation, the permittee shall comply with the requirements of 40 CFR Part 60, Subpart KKKK, Standards of Performance for Stationary Combustion Turbines.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 standard cubic feet.

2. The permittee shall be limited to 1199 hours of operation per year for startups and shutdowns for this emissions unit.

3. As specified in the permittee's PTI application, the maximum heat input rating of this emissions unit is 2830 MM Btu/hr. This value corresponds to a maximum natural gas fuel flow of 2.830 million scf/hr, with a lower heat value of 1000 MMBtu/million scf. The permittee shall operate this emissions unit within the parameters specified above, except for startup* and shutdown. Start-up and shut-down periods shall be defined as any time the unit is operating at less than 60 % load. A cold startup is one that occurs more than 12 hours after shutdown. A hot startup is one that occurs 12 hours or less after shutdown. Typically, cold startup periods will be 4.0 hours in duration and hot startup periods 2.0 hours in duration, and shut-down periods 1.0 hour in duration. Each startup and shutdown shall be limited to the following:

Pollutant	lbs/cold startup	lbs/hot startup	lbs/shutdown
NOx	497	256	79
CO	1777	935	565
VOC	163	87	80

*Startup for testing purposes shall be defined as the date when emission unit P003 is set in operation for any purpose.

4. The SCR system shall be in operation at all times, except for periods of startup and shutdown, defined as any time unit is operating at less than 60% load.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for this emissions unit:

a. number and duration of each cold and hot start-up;
b. number and duration of each shut-down; and
c. the start-up and shut-down emissions* for NOx, CO, and VOC in tons per month.

* The start-up and shut-down emissions shall be based on CEM data, if available. If CEM data is not available, the emissions for each start-up and shut-down shall be based on the pound per event values specified in Section A.II.3, prorated by the actual duration of the event, as recorded per Section A.III.3 below.

2. The permittee shall maintain monthly records of the following information for this emissions unit:

a. the natural gas usage rate for each month (in standard cubic feet);
b. the hours of operation for the combustion turbine;
c. the hours of operation for the duct burner;
d. the monthly emissions for PE/PM_{10}, NOx, SO2, CO, VOC, formaldehyde, ammonia, and H_2SO_4, in tons; and
e. the rolling, 12-month summation of the emissions for PE/PM_{10}, NOx, SO2, CO, VOC, and H_2SO_4 (including start-up and shut-down emissions), in tons.

At the end of each year the permittee shall calculate the annual emissions from each of the pollutants above, in order to fulfill annual reporting requirements.

3. The permittee shall maintain records of the duration of each start-up and shut-down if continuous emissions monitoring system (CEMS) data is not available to document the duration of each event as required in Section A.III.1.

4. The permittee shall install, operate, maintain and certify continuous emissions monitoring system (CEMS) and continuous emissions rate monitoring system (CERMS) equipment to continuously monitor and record NO_x* ,CO, and O_2 from this emissions unit in the units of the standards established in this permit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and 40 CFR Part 75, or as approved in writing by the Ohio EPA, Central Office for this emissions unit.

The permittee shall maintain records of all data obtained by the continuous NO_x, CO, and O_2 monitoring systems including, but not limited to: results of daily zero/span calibration checks; magnitude of manual calibration adjustments; parts per million NO_x, CO, and per cent O_2 on an instantaneous (one-minute) basis; and emissions of NO_x and CO in pounds per million Btu and pounds per hour, in one-hour averages.

In conjunction with the operation of the NOx and CO CEMS and CERMS, the permittee shall install, operate and maintain a system to monitor when the duct burners are being fired. The data measured by this system shall be compiled with the data recorded by the NOx and CO CEMS and CERMS.

* The installation and operation of systems to continuously monitor and record emissions of NOx may be performed in lieu of monitoring the nitrogen content of the fuels being fired in the turbine, as required by 40 CFR 60.334(b).

5. The permittee shall install, operate, maintain and certify equipment to continuously monitor and record the actual fuel flow to the turbine and duct burner when the turbine is in operation. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75. If the fuel flow monitoring and/or recording equipment is (are) not in service when the emissions unit is in operation, the permittee shall comply with the appropriate missing data procedures specified in 40 CFR Part 75, Subparts D and E. The permittee shall maintain an information management system for this emissions unit capable of monitoring and recording the fuel flow (million cubic feet) to the turbine and to the duct burner, hours of operation with duct burner firing, and hours of operation without duct burner firing.

6. The permittee shall maintain documentation on the sulfur contents and heating values of the fuel received. ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels. The permittee shall determine the heat value of the fuel using ASTM method D240. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Ohio EPA. The newest or most recent revisions to the applicable test method shall be used for these analyses. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.

7. The permittee shall determine the hourly heat input rate to the combustion turbine and duct burner from the fuel flow rate as determined in term Section A.III.5, and gross calorific value as determined in term A.III.6. The heat input rate shall be calculated in accordance with the procedures in 40 CFR Part 75, Appendix F, Section 5.

8. Initial compliance with the permit limits shall be demonstrated through the testing requirements found in Section A.V.1. On-going compliance with permit limits for NOx and CO will be demonstrated with CEMS/CERMS, and associated recordkeeping.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emission unit. Each report shall be submitted within 30 days after the deviation occurred.

2. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC Sections 3704.03(I) and 3704.03(l) and 40 CFR Part 60.7 and 60.13 (h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Portsmouth Local Air Agency (or regulating agency) documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NOx or CO values, as recorded by the CEMS, in excess of the applicable limits specified in the terms and conditions of this permit. These reports shall also contain the total NOx and CO emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Portsmouth Local Air Agency (or regulating agency) documenting any continuous NOx, CO, or O_2 monitoring system down time while the emission unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emission unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emission unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer, while the emission unit was on line, shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emission unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emission unit and the total operating time of the analyzer while the emission unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC Sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Portsmouth Local Air Agency (or regulating agency) within 30 days following the end of each calendar quarter in a manner prescribed by the Director

3. The permittee shall submit quarterly deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per 100 standard cubic feet. These reports are due by the date described in Part I - General Terms and Conditions of this permit under Section (A)(2).

4. The permittee shall submit annual deviation (excursion) reports, by February 1 of each year, that identify any exceedance of the restriction on the hours of startup and shutdowns for this emissions unit (1199 hours).

5. The permittee shall submit quarterly deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the start-up/shut-down restrictions specified under Section II.3, or when records were not maintained as required in Sections A.III.1 and A.III.3. These reports are due by the date described in Part I - General Terms and Conditions of this permit.

6. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess emissions reports for this emissions unit in accordance with this permit. These reports are due by the date described in Part I - General Terms and Conditions of this permit.

7. This emission unit is subject to the applicable provisions of Subpart Da and GG of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency in 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, the permittee is hereby advised of the requirement to report the following at the appropriate times:

a. construction date (no later than 30 days after such date);

b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);

c. actual start-up date (within 15 days after such date); and,

d. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to :

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P.O. Box 163669
Columbus, Ohio 43216-3669

and

Portsmouth Local Air Agency
605 Washington Street, Third Floor

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emission unit in accordance with the following requirements:

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emission unit will be operated, but not later than 180 days after initial startup of such emission unit.

b. The emission testing shall be conducted to demonstrate compliance with the NOx and CO outlet concentrations; the mass emission limitations for NOx*, CO, Formaldehyde, VOC, PE/PM_{10}, and ammonia; and the pound per million Btu for PE/PM_{10} and VOC.

c. The following test method(s) shall be employed to demonstrate compliance with the above emission limitations: for NOx, Method 20 of 40 CFR Part 60, Appendix A; for PE/PM_{10}, Methods 201 and 202 of 40 CFR Part 60, Appendix A; for Formaldehyde, SW-846 Method 0011or EPA Method 316; for VOC, Method 25 of 40 CFR Part 60, Appendix A; for CO Method 10 of 40 CFR Part 60, Appendix A; and for ammonia, CTM-027. Alternative USEPA approved test methods may be used with prior approval from the Ohio EPA.

d. The testing shall be conducted while the emission unit is operating at or near its maximum capacity with and without duct burner firing and with power augmentation, unless otherwise specified or approved by Ohio EPA Central Office or Portsmouth Local Air Agency.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency (or regulating agency). The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emission unit operating parameters, the times(s) and date(s) of the test(s), and the person(s) who will be conducting these test(s). Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA Central Office or Portsmouth Local Air Agency's refusal to accept the results of the emission test(s).

f. Personnel from Portsmouth Local Air Agency (or regulating agency) shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit

and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth Local Air Agency (or regulating agency) within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth Local Air Agency (or regulating agency).

In lieu of the test methods and procedures required under 40 CFR Part 60.335, the permittee shall follow the testing requirements in accordance with this permit.

2. Within 60 days after achieving the maximum production rate at which the emission unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of the continuous NOx, CO and O2 monitoring systems pursuant to ORC Section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 2, 3, 4, 6* and 40 CFR Part 75, unless an extension is granted by the Ohio EPA. Personnel from the Portsmouth Local Air Agency and Ohio EPA Central Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, copies of all test results shall be submitted within 30 days after the test is completed. Copies of the test results shall be sent to the Portsmouth Local Air Agency (or regulating agency) and the Ohio EPA, Central Office. Certification of the continuous NOx, CO and O_2 CEMS/CERMS shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of the appropriate Sections of ORC Section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 2, 3, 4 and 6* and 40 CFR Part 75.

* The permittee may use certified NOx CEMS in conjunction with a fuel flow monitor as described in 40 CFR Part 75, and a certified CO CEMS in conjunction with a fuel flow monitor (in a manner similar to that used for NOx) to meet these requirements. The relative accuracy requirements of Performance Specification 6 shall apply in either case.

3. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

NOx emissions shall not exceed:
3.0 ppmvd at 15% Oxygen, based on a 3-hour block averaging period
24.1 lbs/hr without duct burner firing
30.5 lbs/hr with duct burner firing
182.8 tons based on a 12 month rolling summation, which includes 67.5 tons for startups and shutdowns.

Applicable Compliance Method:

Initial compliance with the allowable outlet concentrations and the pound per hour emission limitations shall be demonstrated by the performance testing as described in Section A.V.1, and continual compliance with those limitations shall be demonstrated by the use of the CEMS and CERMS, as required in Section A.III.4. Monthly emissions shall be determined by the adding the hourly CERMS data at the end of each month. If at any time during the month the CERMS data is not available, the hours of start-up/shutdown emissions shall be determined as required in Section A.III.3 and the daily average CERMS data for the mode of operations (power augmentation, with or without duct burners etc.) will be added in place of the CERMS actual hourly average. At the end of each month the monthly emissions (required in Sections A.III.1 and A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

b. Emission Limitation:

Particulate emissions shall not exceed:
12.7 lbs/hr without duct burner firing
0.0096 lb/MMBtu without duct burner firing
25.3 lbs/hr with duct burner firing
0.0101 lb/MMBtu with duct burner firing
110.8 tons, based on a 12 month rolling summation

Applicable Compliance Method:

Compliance with the pound per hour and pound per MMBtu emission limitations shall be demonstrated by the performance testing in Section A.V.1. Monthly emissions shall be calculated by multiplying the hourly emissions rate, determined from the most recent stack test conducted to demonstrate compliance, by the actual annual hours of operation, as recorded in Section A.III.2. At the end of each month the monthly emissions (required in Section A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

c. Emission Limitation:

SO2 emissions shall not exceed:
11.9 lbs/hr without duct burner firing
16.1 lbs/hr with duct burner firing
0.0057 lb/MMBtu with and without duct burner firing
70.5 tons, based on a 12 month rolling summation.

Applicable Compliance Methods:

Compliance with the pound per hour and pound per MMBtu emission limitations shall be demonstrated by the recordkeeping required in Sections A.III.2, A.III.5, and A.III.6. Monthly emissions shall be calculated by multiplying the hourly emissions rate, by the actual annual hours of operation, as recorded in Section A.III.2. If required, compliance shall be demonstrated in accordance with the Method 6 of 40 CFR Part 60, Appendix A. At the end of each month the monthly emissions (required in Section A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

d. Emission Limitation:

VOC emissions shall not exceed
4.2 lbs/hr without duct burner firing
0.003 lb/MMBtu without duct burner firing
30.7 lbs/hr with duct burner firing
0.0118 lb/MMBtu with duct burner firing
148.5 tons, based on a 12 month rolling summation, which includes 32.9 tons for startups and shutdowns.

Applicable Compliance Method:

Initial compliance with the pound per hour and pounds per MMBtu emission limitations shall be demonstrated by the performance testing as described in Section A.V.1. Monthly emissions shall be determined by multiplying the hourly emissions rate, as determined from the most recent stack test conducted to demonstrate compliance, by the actual hours of operation, as recorded in Section A.III.2, and adding the start-up/shutdown emissions, calculated from and maintained as required in Sections A.III.1 and A.III.3. At the end of each month the monthly emissions (required in Sections A.III.1 and A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

e. Emission Limitation:

CO emissions shall not exceed
2 ppmvd at 15 % oxygen when the turbine load is at or above 75% without duct burner firing or the use of power augmentation, based on a 24-hour block averaging period
10 ppmvd at 15 % oxygen without duct burner firing but with the use of power augmentation or when the turbine load is below 75%, based on a 24-hour block averaging period
10 ppmvd at 15% oxygen with duct burner firing, based on a 24-hour block averaging

period
9.8 lbs/hr when the turbine load is at or above 75% without duct burner firing or the use of power augmentation
32.4 lbs/hr without duct burner firing but with the use of power augmentation or when the turbine load is below 75%
61.9 lbs/hr with duct burner firing and/or use of power augmentation
529.8 tons based on a 12 month rolling summation, which includes 298.8 tons for startups and shutdowns.
295.8 tons for startups and shutdowns, based on a 12 month rolling summation

Applicable Compliance Method:

Initial compliance with the allowable outlet concentrations and the pound per hour emission limitations shall be demonstrated by the performance testing as described in Section A.V.1, and continual compliance with those limitations shall be demonstrated by the use of the CEMS and CERMS, as required in Section A.III.4. Monthly emissions shall be determined by the adding the hourly CERMS data at the end of each month. If at any time during the month the CERMS data is not available, the hours of start-up/shutdown emissions shall be determined as required in Section A.III.3 and the daily average CERMS data for the mode of operations (power augmentation, with or without duct burners etc.) will be added in place of the CERMS actual hourly average. At the end of each month the monthly emissions (required in Sections A.III.1 and A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

f. Emission Limitation:

ammonia (NH3) emissions shall not exceed
27.3 lbs/hr without duct burner firing
37.7 lbs/hr with duct burner firing
165.1 tons per year

Applicable Compliance Method:

Compliance with the pound per hour emission limitations shall be demonstrated by the performance testing in Section A.V.1. Monthly emissions shall be calculated by multiplying the hourly emissions rate, determined from the most recent stack test conducted to demonstrate compliance, by the actual annual hours of operation, as recorded in Section A.III.2. Compliance with the annual emission limitation shall be demonstrated at the end of each year by adding the monthly records maintained in Section A.III.2.

g. Emission Limitation:

Formaldehyde emission shall not exceed
0.75 lb/hr without duct burner firing
1.02 lbs/hr with duct burner firing
4.47 TPY

Applicable Compliance Method:

Compliance with the pound per hour emission limitations shall be demonstrated by the performance testing in Section A.V.1. Monthly emissions shall be calculated by multiplying the hourly emissions rate, determined from the most recent stack test conducted to demonstrate compliance, by the actual annual hours of operation, as recorded in Section A.III.2. Compliance with the annual emission limitation shall be demonstrated at the end of each year by adding the monthly records maintained in Section A.III.2.

h. Emission Limitation:

Sulfuric acid (H2SO4) emissions shall not exceed
0.5 lb/hr without duct burner firing
0.7 lb/hr with duct burner firing
3.1 tons based on a 12 month rolling summation
0.00026 lb/MMBtu with and without duct burner firing

Applicable Compliance Method:

Compliance with the pound per hour and pounds per MMBtu emission limitations shall be demonstrated by the recordkeeping required in Sections A.III.2, A.III.5, and A.III.6 for the pollutant SO_2. Based on testing of similar sources, approximately 3% of the SO_2 emissions are converted to sulfuric acid. Monthly emissions shall be calculated by the multiplying the hourly emissions rate determined for SO_2 by 3%, and this hourly rate by the actual annual hours of operation, as recorded in Section A.III.2. At the end of each month the monthly emissions (required in Section A.III.2) shall be added to the previous 11 months to determine the total rolling 12-month emissions.

i. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six minute average.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in OAC rule 3745-17-03(B)(1) determined according to Method 9 of 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

1. In accordance with good engineering practices, the SCR unit on emissions unit P001 shall be installed, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall maintain on site a copy of the operation & maintenance manual, as provided by the manufacturer.

2. Prior to the installation of the continuous NO_x and CO monitoring systems, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2, 4 and 6* (or as described in condition A.V.1.) for approval by the Ohio EPA, Central Office.

* for Performance Specification 6 see Section V.2.

3. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NOx, CO, and O_2 monitoring system designed to ensure continuous valid and representative readings of NOx, CO, and O_2 emissions in units of the applicable standard. The plan shall follow the requirements of the appropriate Sections of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B, or as

approved by the Ohio EPA, Central Office. The quality assurance/quality control plan and logbook dedicated to the continuous NOx, CO, and O_2 monitoring system must be kept on site and available for inspection during regular office hours.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P003 - 180 MW Westinghouse 501F natural gas fired combustion turbine No 3 with duct firing during combined cycle mode controlled by selective catalytic reduction (SCR) and oxidation catalyst	None	Compliance with OEPA Air Toxic Policy; See Part II. Section B.

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P004 - 22 cell mechanical draft cooling tower	OAC rule 3745-31-(10) through(20)	Particulate (PE/PM_{10}) emissions shall not exceed 1.69 lb/hr. PE/PM_{10} emissions shall not exceed 7.40 tpy. based on a 12 month rolling average. See section A.I.2.a below.
	OAC rule 3745-31-05 (A)(3)	See section A.I.2.b below.
	OAC rule 3745-17-11 (B)(4)	See section A.I.2.c below.
	OAC rule 3745-17-07 (A)(1)	Visible particulate emissions shall not exceed 20 percent opacity as a six-minute average, except as provided by rule. See A.I.2.d below.

2. Additional Terms and Conditions

2.a Per the requirements of OAC rule 3745-31-10 through 20, the permittee is required to perform a Best Available Control Technology (BACT) review for PM/PM_{10}. The implementation of high efficiency drift eliminators constitute BACT for this emissions unit.

2.b The requirements of this rule also include compliance with the requirements of OAC

rule 3745-31-10 through 20 and OAC rule 3745-17-07 (A)(1).

2.c The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).

2.d It shall not be deemed to be a violation of this limit, where the presence of uncombined water is the only reason for visible emissions exceeding 20% opacity from the stack.

II. Operational Restrictions

1. The permittee shall maintain an average total dissolved solids content of 2,500 ppm or less in this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform the following monitoring requirements for this emissions unit on a monthly basis:

   a. test and record the total dissolved solids content; and

   b. determine the average dissolved solids content based on a rolling 12 month average.

IV. Reporting Requirements

1. The permittee shall submit deviation reports in accordance with the general terms and conditions of this permit that identify any exceedances of the average total dissolved solids content.

V. Testing Requirements

1. Compliance with the allowable emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

   particulate (PE/PM_{10}) emissions shall not exceed 1.69 lbs/hr and 7.40 tpy.

   Applicable Compliance Method:

   Compliance with the lbs/hr emission limitation shall be demonstrated by multiplying the maximum drift loss factor 0.0005 percent by the circulating water flow rate of each

cell (gal/min) by the number of cells (22) by the maximum average total dissolved solids content of 2,500 ppm for the cooling water and the appropriate conversion factors (8.34 lbs/gal, 60 min/hr, 1/100 percent) and dividing by 1,000000 (ppm).

If required, the permittee shall submit a testing proposal which will demonstrate that the maximum drift loss does not exceed 0.0005 percent.

Compliance with the annual emission limitation shall be demonstrated by the multiplying the hourly emission rate by the actual monthly operating hours and dividing by 2000 lbs/ton.

b. Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity as a six-minute average, except as provided by rule

Applicable Compliance Method:

Compliance with the visible emissions limitations established by this permit shall be determined by OAC rule 3745-17-03(B)(10).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P004 - 22 cell mechanical draft cooling tower	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None