



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL CERTIFIED MAIL  
WASHINGTON COUNTY**

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov.  
Center

**Application No: 06-06206**

**DATE: 03/29/2001**

PSEG Waterford Energy LLC  
Mick Mastilovic  
80 Park Plaza, Mail Code T191  
Newark, NJ 07102

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

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.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Director's action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
236 East Town Street, Room 300  
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo  
Field Operations and Permit Section  
Division of Air Pollution Control

CC: USEPA

SEDO

Joseph B. Suhre, URS Corporation Martha Sprubeck, DSW



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install

Issue Date: March 29, 2001

**FINAL PERMIT TO INSTALL 06-06206**

Application Number: 06-06206  
APS Premise Number: 0684000213  
Permit Fee: **\$1000**  
Name of Facility: PSEG Waterford Energy LLC  
Person to Contact: Mick Mastilovic  
Address: 80 Park Plaza, Mail Code T191  
Newark, NJ 07102

Location of proposed air contaminant source(s) [emissions unit(s)]:

**Township Rd 32  
Beverly, Ohio**

Description of proposed emissions unit(s):

**Phase I - 500 MW natural gas fired simple cycle power plant  
Phase II - 850 MW natural gas fired combined cycle power plant**

Description of proposed wastewater disposal system:

**Cooling towers, oil/water separator, and heat exchange for combined cycle natural gas electric generating plant.**

The Director has determined that a lowering of water quality in the Muskingum River is necessary. In accordance with OAC 3745-1-05, this decision was reached only after examining a series of technical alternatives, reviewing social and economic issues related to the degradation, and considering all public and appropriate intergovernmental comments. The lowering of water quality is necessary to accommodate important social or economic development in the area in which the water body is located.

The above named entity is hereby granted a Permit to Install for the above described **air emissions unit(s) and wastewater sources** 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

# **SECTION I**

## **APPLICABLE AIR REQUIREMENTS**

**Part I - GENERAL TERMS AND CONDITIONS****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 emission limitations, operational restrictions, and control device operating parameter limitations, 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.11 below if no deviations occurred during the quarter.

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- 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

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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 thirty (30) 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.

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**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 Related to Monitoring and Recordkeeping 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. 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.

**5. 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.

#### **6. 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 are inadequate 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 prove to be inadequate or cannot meet applicable standards.

#### **7. 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.

#### **8. 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).

#### **9. Construction Compliance Certification**

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The applicant shall provide Ohio EPA with a written certification (see enclosed form) 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.

**10. 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**

<u>Pollutant</u>	<u>Tons Per Year</u>
NOx	163.2 (Phase I)
	443.0 (Phase II)
SO2	30.6 (Phase I)
	169.7 (Phase II)
CO	84.2 (Phase I)
	1104.6 (Phase II)
VOC	8.2 (Phase I)
	95.7 (Phase II)
PM	45.9 (Phase I)
	300.3 (Phase II)
Ammonia (NH3)	369.2 (Phase II)
Formaldehyde	0.5 (Phase I)
	2.6 (Phase II)
Sulfuric Acid	1.2 (Phase I)
	6.8 (Phase II)

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**Part II - FACILITY SPECIFIC TERMS AND CONDITIONS**

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

None

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

None

PSEG Waterford Energy LLC  
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Issued

Facility ID: 0684000213

Emissions Unit ID: B001

**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

**PHASE II ONLY**

B001 - 93.2 MMBtu/hr  
Natural Gas Fired Boiler

OAC Rule 3745-31-05(A)(3)

40 CFR 60 Subpart Dc  
OAC Rule 3745-18-06(A)  
OAC Rule 3745-17-10(B)(1)

OAC Rule 3745-17-07(A)

40 CFR 52.21  
OAC Rule 3745-31- (13) thru (20)

**PSEG**

**PTI A**

Emissions Unit ID: B001

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Applicable Emissions  
Limitations/Control  
Measures

The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart Dc, OAC rule 3745-18-06(A), 3745-17-10(B)(1), OAC rule 3745-17-07(A), 40 CFR 52.21, and OAC 3745-31-(13) thru (20).

nitrogen oxide (NOx) emissions shall not exceed:  
0.05 lb/MMBtu actual heat input  
4.66 lb/hr and 2.3 ton per year

sulfur dioxide (SO2) emissions shall not exceed:  
0.000584 lb/MMBtu actual heat input  
0.054 lb/hr and 0.03 ton per year

carbon monoxide (CO) emissions shall not exceed:  
0.1 lb/MMBtu actual heat input  
9.32 lb/hr and 4.7 ton per year

volatile organic compounds (VOC) emissions shall not exceed:  
0.00535 lb/MMBtu actual

heat input  
0.50 lb/hr and 0.25 ton per year

particulate matter (PM) emissions shall not exceed:  
0.00739 lb/MMBtu actual heat input  
0.69 lb/hr and 0.34 ton per year

The emission limitations specified by these rules are less stringent than those established above;

20% opacity as a six minute average, except as provided by rule

Operational restriction, see Item A.II.2.

The tons per rolling 12-month period shall not exceed :  
NOx - 2.3  
SO2 - 0.03  
PM - 0.34  
CO - 4.7  
VOC - 0.25

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**2. Additional Terms and Conditions**

2.a None

**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 hourly fuel heat input for emissions unit B001 shall not exceed 93.2 MMBtu/hr. The maximum annual fuel heat input for emissions unit B001 shall not exceed 93,200 MMBtu, based upon a rolling, 12-month summation.

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

Month	Cumulative Fuel Heat Input (MMBtu)
1	69,341
1-2	93,200
1-3	93,200
1-4	93,200
1-5	93,200
1-6	93,200
1-7	93,200
1-8	93,200
1-9	93,200
1-10	93,200
1-11	93,200
1-12	93,200

After the first 12 calendar months following the startup of emissions unit B001, compliance with the annual fuel consumption restriction shall be based on a rolling, 12-month summation.

**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 emissions unit.

**Issued**

Emissions Unit ID: B001

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 hourly records of the fuel quantity used (cubic feet) and the heat input (MMBtu/hr). During the first 12 calendar months of operation, the permittee shall also record the cumulative fuel heat input (MMBtu). Beginning after 12 months of operation of this emission unit, records of the rolling, 12-month summation of fuel heat input shall be maintained.

**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 emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit 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).
3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the hourly fuel heat input limitation and the rolling, 12-month fuel heat input limitation and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative fuel heat input limitations. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
4. 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

**PSEG****PTI A**

Emissions Unit ID: B001

**Issued: March 29, 2001**

P. O. Box 163669  
Columbus, Ohio 43216-3669

and

Ohio Environmental Protection Agency  
Southeast District Office  
Division of Air Pollution Control  
2195 Front Street  
Logan, Ohio 43138

**5. 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 of notice is by mail, in which case the effective date of the permit shall be 33 days after the service of notice; and (2) if an appeal is made to the Environmental Appeals Board of the United States 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

**V. Testing Requirements****1. Emission Limitation:**

NO<sub>x</sub>  
0.05 lb/MMBtu, 4.66 lb/hr and 2.3 tons per year

Applicable Compliance Method:

lb/MMBtu

Compliance shall be demonstrated using the AP-42 emission factor (0.05 lb NO<sub>x</sub> /MMBtu).

lb/hr

Compliance shall be demonstrated by multiplying the AP-42 emission factor (0.05 lb NO<sub>x</sub> /MMBtu) by the actual fuel heat input rate (MMBtu/hr)

tons per year

Compliance shall be demonstrated by multiplying the NO<sub>x</sub> emission factor (0.05 lb NO<sub>x</sub>/MMBtu) by the actual fuel heat input (MMBtu/yr) and dividing by 2000 lb/ton.**2.** Emission Limitation:SO<sub>2</sub>

0.000584 lb/MMBtu, 0.054 lb/hr and 0.03 tons per year

Applicable Compliance Method:

lb/MMBtu

Compliance shall be demonstrated using the AP-42 emission factor (0.000584 lb SO<sub>2</sub> /MMBtu).

lb/hr

Compliance shall be demonstrated by multiplying the AP-42 emission factor (0.000584 lb SO<sub>2</sub> /MMBtu) by the actual fuel heat input rate (MMBtu/hr).

tons per year

Compliance shall be demonstrated by multiplying the SO<sub>2</sub> emission factor (0.000584 lb SO<sub>2</sub>/MMBtu) by the actual fuel heat input (MMBtu/yr) and dividing by 2000 lb/ton.**3.** Emission Limitation:

CO

0.10 lb/MMBtu, 9.32 lb/hr and 4.7 tons per year

Applicable Compliance Method:

lb/MMBtu

Compliance shall be demonstrated using the AP-42 emission factor (0.10 lb CO /MMBtu)

lb/hr

Compliance shall be demonstrated by multiplying the AP-42 emission factor (0.10 lb CO /MMBtu) by the actual fuel heat input rate (MMBtu/hr).

tons per year

Compliance shall be demonstrated by multiplying the CO emission factor (0.10 lb CO /MMBtu) by the actual fuel heat input (MMBtu/yr) and dividing by 2000 lb/ton.

4. Emission Limitation:

VOC

0.00535 lb/MMBtu, 0.50 lb/hr and 0.25 tons per year

Applicable Compliance Method:

lb/MMBtu

Compliance shall be demonstrated using the AP-42 emission factor (0.00535 lb VOC /MMBtu).

lb/hr

Compliance shall be demonstrated by multiplying the AP-42 emission factor (0.00535 lb VOC /MMBtu) by the actual fuel heat input rate (MMBtu/hr).

tons per year

Compliance shall be demonstrated by multiplying the VOC emission factor (0.00535 lb VOC /MMBtu) by the actual fuel heat input (MMBtu/yr) and dividing by 2000 lb/ton.

5. Emission Limitation:

PM

0.00739 lb/MMBtu, 0.69 lb/hr and 0.34 ton per year

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Applicable Compliance Method:

lb/MMBtu

Compliance shall be demonstrated using the AP-42 emission factor (0.00739 lb PM /MMBtu).

lb/hr

Compliance shall be demonstrated by multiplying the AP-42 emission factor (0.00739 lb PM /MMBtu) by the actual fuel heat input rate (MMBtu/hr).

tons per year

Compliance shall be demonstrated by multiplying the PM emission factor (0.00739 lb PM /MMBtu) by the actual fuel heat input (MMBtu/yr) and dividing by 2000 lb/ton.

6. Emission Limitation:

Tons per rolling 12 -month period shall not exceed :

NO<sub>x</sub> - 2.3

SO<sub>2</sub> - 0.03

PM - 0.34

CO - 4.7

VOC - 0.25

Applicable Compliance Method:

Compliance with the annual emission limitations shall be determined by the record keeping required in Items A.III(2 and 3) and the AP-42 emission factors.

7. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be demonstrated by the method specified in OAC rule 3745-17-03(B)(1).

**VI. Miscellaneous Requirements**

None

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**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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B001 - 93.2 MMBtu/hr Natural Gas Fired 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.

<u>Operations, Property, and/or Equipment</u>		
<p><b>PHASE I</b></p> <p>P001 - GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine</p>		<p><b>PHASE II</b></p> <p>P001 - GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine with Duct Firing Operated in Combined Cycle Mode and Controlled by Selective Catalytic Reduction (SCR)</p>

Applicable  
Rules/Requirements

OAC Rule 3745-31-05  
(A)(3)

OAC Rule 3745-31-05 (A)(3)

40 CFR part 60, Subpart GG

OAC Rule 3745-18-06(F)

OAC Rule 3745-17-11 (B)(4)

OAC Rule 3745-17-07(A)

OAC Rule 3745-31-05  
(A)(3)

40 CFR 52.21

OAC Rule 3745-31- (13) thru (20)

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OAC Rule 3745-31-05 (A)(3)

OAC Rule 3745-31-05 (A)(3)

OAC Rule 3745-31-05 (A)(3)

OAC Rule 3745-31-05 (A)(3)

40 CFR part 60, Subpart GG

40 CFR part 60, Subpart Da

OAC Rule 3745-18-06(F)

OAC Rule 3745-17-11 (B)(4)

OAC Rule 3745-17-07(A)

40 CFR 52.21

OAC Rule 3745-31- (13) thru (20)

40 CFR Part 75

OAC rule 3745-103

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Applicable Emissions  
Limitations/Control  
Measures

The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart GG, OAC rule 3745-18-06(F), 3745-17-11(B)(4), OAC rule 3745-17-07(A), 40 CFR 52.21, and OAC 3745-31-(13) thru (20).

**PHASE I EMISSION LIMITS**

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 9.0 ppmvd at 15% Oxygen and 64.0 lbs/hr

particulate matter (PM) emissions shall not exceed 18.0 lbs/hr

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 12.0 lbs/hr

carbon monoxide (CO) emissions shall not exceed 9.0 ppmvd and 33.0 lbs/hr

volatile organic compounds (VOC) emissions shall not exceed 3.2 lbs/hr

formaldehyde emissions shall

not exceed  
0.19 lbs/hr

sulfuric acid emissions shall not exceed  
0.48 lbs/hr

**TOTAL TONS PER YEAR - PHASE I  
(limited to 2,965,310 MMBtu/yr fuel heat input)**

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 54.4 tons per year

particulate matter (PM) emissions shall not exceed 15.3 tons per year

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 10.2 tons per year

carbon monoxide (CO) emissions shall not exceed 28.1 tons per year

volatile organic compounds (VOC) emissions shall not exceed 2.7 tons per year

formaldehyde emissions shall not exceed 0.16 tons per year

sulfuric acid emissions shall not exceed  
0.41 tons per year

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average

Operational restriction, see Item A.II.1.

See Item A.I.2.b.

See Item A.I.2.a.

See Item A.I.2.a.

See Item A.I.2.a.

Operational restriction, see Item A.II.3.

The tons per rolling 12-month period shall not exceed :

NO<sub>x</sub> - 54.4

SO<sub>2</sub> - 10.2

PM - 15.3

CO - 28.1

VOC - 2.7

**EMISSION LIMITS WITHOUT DUCT BURNER FIRING - PHASE II**

The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart GG, OAC rule 3745-18-06(F), 3745-17-11(B)(4), OAC rule 3745-17-07(A), 40 CFR 52.21, and OAC 3745-31- (13) thru (20).

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 3.5 ppmvd at 15% Oxygen and 25.0 lbs/hr

particulate matter (PM) emissions shall not exceed 21.0 lbs/hr

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 12.0 lbs/hr

carbon monoxide (CO) emissions shall not

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exceed 9.0 ppmvd and 33.0 lbs/hr	carbon monoxide (CO) emissions shall not exceed 15.0 ppmvd and 69.0 lbs/hr	sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 56.6 tons per year
volatile organic compounds (VOC) emissions shall not exceed 3.2 lbs/hr	volatile organic compounds (VOC) emissions shall not exceed 6.8 lbs/hr	carbon monoxide (CO) emissions shall not exceed 366.6 tons per year
ammonia (NH <sub>3</sub> ) emissions shall not exceed 26.0 lbs/hr	ammonia (NH <sub>3</sub> ) emissions shall not exceed 30.6 lbs/hr	volatile organic compounds (VOC) emissions shall not exceed 31.8 tons per year
formaldehyde emissions shall not exceed 0.19 lbs/hr	formaldehyde emissions shall not exceed 0.21 lbs/hr	ammonia (NH <sub>3</sub> ) emissions shall not exceed 123.1 tons per year
sulfuric acid emissions shall not exceed 0.48 lbs/hr	sulfuric acid emissions shall not exceed 0.56 lbs/hr	formaldehyde emissions shall not exceed 0.87 tons per year
<b>EMISSION LIMITS WITH DUCT BURNER FIRING - PHASE II</b>	<b>STARTUP AND SHUTDOWN EMISSIONS - PHASE II</b> (see Item A.II.2.)	Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average
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), 40 CFR 52.21, and OAC 3745-31-(13) thru (20).	nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 27.4 tons per year	Operational restriction, see Item A.II.1.
	carbon monoxide (CO) emissions shall not exceed 150.1 tons per year	See Item A.I.2.b.
	volatile organic compounds (VOC) emissions shall not exceed 10.6 tons per year	See Item A.I.2.a.
		See Item A.I.2.a.
		See Item A.I.2.a.
nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 3.5 ppmvd at 15% Oxygen and 30.0 lbs/hr	<b>TOTAL TONS PER YEAR INCLUDING STARTUP / SHUTDOWN PERIODS - PHASE II</b> <b>(duct burner limited to 1.44 x 10<sup>6</sup> MMBtu per year fuel heat input)</b>	See Item A.I.2.a.
	nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 146.9 tons per year	Operational restriction, see Item A.II.4.
particulate matter (PM) emissions shall not exceed 25.0 lbs/hr	particulate matter (PM) emissions shall not exceed 100.0 tons per year	The tons per rolling 12-month period shall not exceed :
sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 14.0 lbs/hr		NO <sub>x</sub> - 146.9
		SO <sub>2</sub> - 56.6
		PM - 100.0
		CO - 366.6
		VOC - 31.8

See Item A.I.2.c.

## **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 3745-31-05.
- 2.b** The emissions limits based on this applicable rule are equivalent to or less stringent than the limits established pursuant to OAC rule 3745-31-05. 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** If the permittee is subject to the requirements of 40 CFR Part 75 concerning acid rain, the permittee shall ensure that any effected 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.

## **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.** Startup and shutdown shall be defined as when the unit is running at less than 50% of electric load, but under no circumstances shall startups exceed 250 minutes in duration and shutdowns shall not exceed 2 hours in duration. The total of all hot, warm and cold startups (as defined below) and shutdowns shall be limited to 286 cycles (one startup and one shutdown) per year.

Hot Start - startup occurs within eight (8) hours after plant shutdown

Warm Start - startup occurs between eight (8) hours to seventy-two (72) hours after a plant shutdown

Cold Start - startup occurs more than seventy-two (72) hours after a plant shutdown

Each startup and shutdown shall be limited to the following:

Pollutant    Total lbs / Cycle

NOx	418
CO	1127
VOC	97

During Phase I, startup / shutdown emissions are not anticipated to increase above levels defined during normal operation of the simple cycle turbines.

3. During Phase I, the maximum hourly fuel heat input for emission unit P001 shall not exceed 1744.3 MMBtu/hr and the annual maximum fuel heat input shall not exceed 2,965,310 MMBtu per year based upon a rolling, 12-month summation. Due to this operational restriction, CEMs will not be installed until Phase II.

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

Month	Cumulative Fuel Heat Input (MMBtu)
1	1,297,759
1-2	2,595,518
1-3	2,965,310
1-4	2,965,310
1-5	2,965,310
1-6	2,965,310
1-7	2,965,310
1-8	2,965,310
1-9	2,965,310
1-10	2,965,310
1-11	2,965,310
1-12	2,965,310

If Phase I extends beyond the first 12 calendar months following the startup of emissions unit P001, compliance with the annual fuel heat input restriction shall be based on a rolling, 12-month summation.

4. During Phase II, the maximum hourly combustion turbine fuel heat input shall not exceed 1744.3 MMBtu/hr.

The maximum hourly fuel heat input of the duct burner for emission unit P001 shall not exceed 360 MMBtu/hr. The maximum annual fuel heat input of the duct burner shall not exceed  $1.44 \times 10^6$  MMBtu per year, based upon a rolling, 12-month summation.

To ensure enforceability during the first 12 calendar months following the startup of the duct burner, the permittee shall not exceed the monthly duct burner fuel heat input restrictions specified in the following table:

Month	Cumulative Fuel Heat Input (MMBtu)
1	$0.26784 \times 10^6$
1-2	$0.53568 \times 10^6$
1-3	$0.80352 \times 10^6$
1-4	$1.07136 \times 10^6$
1-5	$1.44 \times 10^6$
1-6	$1.44 \times 10^6$
1-7	$1.44 \times 10^6$
1-8	$1.44 \times 10^6$
1-9	$1.44 \times 10^6$
1-10	$1.44 \times 10^6$
1-11	$1.44 \times 10^6$
1-12	$1.44 \times 10^6$

After the first 12 calendar months following the startup of the duct burner, compliance with the annual fuel heat input restriction shall be based on a rolling, 12-month summation.

**5. Continuous NO<sub>x</sub> Monitoring - Certified Systems**  
Statement of Certification (Phase II Only)

Prior to the installation of the continuous NO<sub>x</sub> monitoring system, 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 6 for approval by the Ohio EPA, Central Office.

Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of such equipment pursuant to the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 6, and 40 CFR Part 75. Personnel from the appropriate Ohio EPA District Office or local air agency 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, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within

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30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous NO<sub>x</sub> monitoring system 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 6, and 40 CFR Part 75.

6. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NO<sub>x</sub> monitoring system designed to ensure continuous valid and representative readings of NO<sub>x</sub> 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. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.
7. Continuous CO Monitoring - Certified Systems  
Statement of Certification (Phase II Only)

Prior to the installation of the continuous CO monitoring system, 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 4 and 6 for approval by the Ohio EPA, Central Office.

Within 60 days after achieving the maximum production rate at which the emissions 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 CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the appropriate Ohio EPA District Office or local air agency 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, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4 and 6.

8. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during

regular office hours.

**9. Continuous O<sub>2</sub> or CO<sub>2</sub> Monitoring - Certified Systems**  
**Statement of Certification (Phase II Only)**

Prior to the installation of the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system, 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 3 for approval by the Ohio EPA, Central Office.

Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of such equipment pursuant to the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 3, and 40 CFR Part 75. Personnel from the appropriate Ohio EPA District Office or local air agency 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, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office.

Certification of the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system 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 3, and 40 CFR Part 75.

- 10.** Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system designed to ensure continuous valid and representative readings of O<sub>2</sub> or CO<sub>2</sub> 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. The quality assurance/quality control plan and a logbook dedicated to the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system must be kept on site and available for inspection during regular office hours.

**III. Monitoring and/or Recordkeeping Requirements**

- 1. Phase I and II:** The permittee shall maintain monthly records of the following information for each emissions unit:
- a. The natural gas usage rate for each month (in standard cubic feet).
  - b. Hours of operation of the combustion turbine
  - c. Hours of operation of the duct burner (Phase II)
  - d. Monthly fuel heat input (MMBtu) to the combustion turbine

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- e. Monthly fuel heat input (MMBtu) to the duct burner (Phase II)
  - f. During the first 12 calendar months of operation, the permittee shall also record the cumulative fuel heat input to each combustion turbine and duct burner. Beginning after 12 months of operation of the emission unit, records of the rolling, 12-month summation of fuel heat input shall be maintained.
2. **Phase I and II:** The permittee shall maintain hourly records of the following information for each emissions unit:
- a. Hourly fuel heat input (MMBtu) to the combustion turbine
  - b. Hourly fuel heat input (MMBtu) to the duct burner (Phase II)
3. **Phase II:** The permittee shall operate and maintain existing equipment to continuously monitor and record NO<sub>x</sub> from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements of the appropriate sections specified in 40 CFR Part 60.13 and 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous NO<sub>x</sub> monitoring system including, but not limited to, parts per million NO<sub>x</sub> on an instantaneous (one-minute) basis, emissions of NO<sub>x</sub> in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

4. **Phase II:** The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, annual, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

5. **Phase II:** The permittee shall operate and maintain equipment to continuously monitor and record O<sub>2</sub> or CO<sub>2</sub> from this emissions unit in percent O<sub>2</sub> or CO<sub>2</sub>. Such continuous monitoring and recording equipment shall comply with the requirements in the appropriate sections specified in 40 CFR Part 60.13 and 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system including, but not limited to, percent O<sub>2</sub> or CO<sub>2</sub> on an instantaneous (one-minute) basis,

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emissions of O<sub>2</sub> or CO<sub>2</sub> in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. **Phase II:** The permittee shall install, calibrate, operate, and maintain continuous monitoring systems to monitor and record the average hourly fuel consumption of the combustion turbine and duct burner. The fuel flow monitoring systems comply with the requirements of 40 CFR Part 75, Appendix D.
7. **Phase I and II:** The permittee shall monitor the sulfur content and gross calorific value of the fuel being fired in the combustion turbine and duct burner. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.
8. **Phase II:** 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 A.III.6 and fuel gross calorific value as determined in term A.III.7. The heat input rate shall be calculated in accordance with the procedures in Section 5 of 40 CFR Part 75, Appendix F.
9. **Phase II:** The permittee shall maintain records of the following information for each emissions unit:
  - a. Number of startups, type of startup (hot, warm or cold) and the duration of each startup.
  - b. Number of shutdowns, and the duration of each shutdown.
  - c. During the first 12 calendar months of operation, the permittee shall also record the cumulative number of startups and shutdowns and the associated startup and shutdown emissions (NO<sub>x</sub>, CO and VOC) for each emissions unit calculated as described in Item V.2.(a,d and e). Beginning after 12 months of operation of the emission unit, records of the rolling, 12-month summation of the number of startups and shutdowns and the associated startup and shutdown emissions (NO<sub>x</sub>, CO and VOC) shall be maintained.
10. **Phase II:** The permittee shall maintain hourly records of the following information for this emissions unit:

in lb(s)/hr emissions rate for NO<sub>x</sub> and CO as obtained from terms III.3. and III.4. based upon an hourly averaging period as allowed in the appropriate sections of 40 CFR Part 60.
11. **Phase II:** The permittee shall maintain monthly records of the following information for this emissions unit:

- a. the operating hours;
- b. during the first 12 calendar months of operation, the permittee shall record the cumulative operating hours for each calendar month; and
- c. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the operating hours.
- d. during the first 12 calendar months of operation, the cumulative NO<sub>x</sub> and CO emissions, in tons (obtained by summing the values recorded under condition III.10. and dividing by 2000); and
- e. beginning after the first 12 calendar months of operation, the rolling, 12-month NO<sub>x</sub> and CO emissions, in tons

## 12. 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 of notice is by mail, in which case the effective date of the permit shall be 33 days after the service of notice; and (2) if an appeal is made to the Environmental Appeals Board of the United States 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

## IV. Reporting Requirements - Phase I and II

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

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Phase I hourly and rolling, 12-month allowable combustion turbine fuel heat input levels and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative combustion turbine heat input levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the Phase II hourly combustion turbine fuel heat input limitation and the hourly and rolling, 12-month duct burner fuel heat input limitations and, for the first 12 calendar months of operation, all exceedances of the maximum cumulative duct burner fuel heat input levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
4. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of  $NO_x$  values in excess of the applicable limits specified in 40 CFR Part 76 and any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total  $NO_x$  emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any continuous  $NO_x$  monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

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 emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions 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.

5. 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.

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The summary shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

6. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total 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 appropriate Ohio EPA District Office or local air agency documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

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 emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions 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, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

7. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting all instances of continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report. These quarterly 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.
8. The permittee shall submit 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).

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9. The permittee shall submit deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the startup and shutdown requirements of condition II.2. above or the annual startup and shutdown emissions limitations calculated as described in Item V.2.(a, d and e). These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
10. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess emissions reports for emissions unit P001 in accordance with this permit.
11. This emissions 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, 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

Ohio Environmental Protection Agency  
 Southeast District Office  
 Division of Air Pollution Control  
 2195 Front Street  
 Logan, Ohio 43138

## V. Testing Requirements - Phase I and II

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 60 days after achieving the maximum

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production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.

- b. The emission testing shall be conducted to demonstrate compliance with the NO<sub>x</sub> and CO outlet concentration, and the mass emissions limitations for NO<sub>x</sub>,\* CO, Formaldehyde, VOC, PM and visible emission limitations.
- c. The following test method(s) shall be employed to demonstrate compliance with the above emissions limitations: for NO<sub>x</sub>, Method 20 of 40 CFR Part 60, Appendix A; for PM, Method 5 of 40 CFR Part 60, Appendix A; for visible emission limitations, Method 9 of 40 CFR Part 60, Appendix A; for Formaldehyde, SW-846 Method 0011; for VOC Method 25 of 40 CFR Part 60, Appendix A; and for CO Method 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity with and without duct burner firing, unless otherwise specified or approved by Ohio EPA or 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 Ohio EPA, Southeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Southeast District Office refusal to accept the results of the emission test(s).
- f. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), 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 emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southeast District Office 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 Ohio EPA, Southeast District Office.

\* Using the test methods and procedures required under 40 CFR Part 60.335.

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2. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

a. Emission Limitation - NO<sub>x</sub>

**Phase I:**

NO<sub>x</sub> emissions shall not exceed 9.0 ppmvd at 15% Oxygen  
64.0 lbs/hr  
54.4 tons per year

**Phase II:**

NO<sub>x</sub> emissions shall not exceed 3.5 ppmvd at 15% Oxygen  
25.0 lbs/hr without duct burner firing  
30.0 lbs/hr with duct burner firing  
146.9 tons per year, which includes 27.4 tpy for startups and shutdowns

Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1. and continual compliance with those limitations shall be demonstrated by the use of the CEM (Phase II) in condition III.3. based upon an hourly averaging period as allowed in 40 CFR Part 60. During Phase I, compliance with the annual emission limitation shall be determined by multiplying the emission factor supplied by the permittee (0.0367 lb NO<sub>x</sub>/MMBtu) by the actual fuel heat input (MMBtu/yr) and dividing by 2000 lbs/ton. During Phase II, compliance with the annual emission limitation shall be determined by summing the emissions demonstrated through the record keeping required in condition III.11. (CEM measured emissions) with the start-up and shut-down emissions. The annual emissions associated with start-up and shut-down shall be determined using the record keeping required in condition III.9. and the following calculation.

Annual Startup / Shutdown Emissions (tpy) = [(# of cold starts x 418 lbs. per start) + (# of warm starts x 144 lbs. per start) + (# of hot starts x 114 lbs. per start)] / 2000 lbs. per ton

b. Emission Limitation - PM

PM emissions shall not exceed:

**Phase I:**

18.0 lbs/hr  
15.3 tons per year

**Phase II:**

21.0 lbs/hr without duct burner firing  
25.0 lbs/hr with duct burner firing  
100.0 tons per year

Applicable Compliance Method

Compliance with the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1. Compliance with the annual emission limitation shall be determined by multiplying the emission rates (in lb/MMBtu as determined by taking the allowable emission rate in lb/hr divided by the maximum heat input in MMBtu/hr) for operation with and without the duct burner firing by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

c. Emission Limitation - SO<sub>2</sub>

SO<sub>2</sub> emissions shall not exceed:

**Phase I:**

12.0 lbs/hr  
10.2 tons per year

**Phase II:**

12.0 lbs/hr without duct burner firing  
14.0 lbs/hr with duct burner firing  
56.6 tons per year

Applicable Compliance Method

Compliance with the hourly emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 8. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitation shall be determined by multiplying the emission factor supplied by the permittee (0.0069 lb/MMBtu without duct burner firing; 0.00665 lb/MMBtu with duct burner firing) by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

d. Emission Limitation - VOC

VOC emissions shall not exceed:

**Phase I:**

3.2 lbs/hr  
 2.7 tons per year

**Phase II:**

3.2 lbs/hr without duct burner firing  
 6.8 lbs/hr with duct burner firing  
 31.8 tons per year, which includes 10.6 tpy for startups and shutdowns

Applicable Compliance Method

Compliance with the lbs/hr limitations shall be demonstrated by the performance testing described in condition V.1. Compliance with the annual emission limitation shall be determined by multiplying the emission rates (in lb/MMBtu as determined by taking the allowable emission rate in lb/hr divided by the maximum heat input in MMBtu/hr) for operation with and without the duct burner firing by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton, summing the values and adding the start-up and shut-down emissions. The annual emissions associated with start-up and shut-down shall be determined using the record keeping required in condition III.9. and the following calculation.

Annual Startup / Shutdown Emissions (tpy) = [(# of cold starts x 97 lbs. per start) + (# of warm starts x 74 lbs. per start) + (# of hot starts x 34 lbs. per start)] / 2000 lbs. per ton

e. Emission Limitation - CO

CO emissions shall not exceed:

**Phase I:**

9.0 ppmvd  
 33.0 lbs/hr  
 28.1 tons per year

**Phase II:**

9.0 ppmvd without duct burner firing  
 15.0 ppmvd with duct burner firing  
 33.0 lbs/hr without duct burner firing  
 69.0 lbs/hr with duct burner firing  
 366.6 tons per year, which includes 150.1 tpy for startups and shutdowns

Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1 and continual compliance with those limitations shall be demonstrated by the use of the CEM (Phase II) in condition III.4. based upon an hourly averaging period as allowed in 40 CFR Part 60. During Phase I, compliance with the annual emission limitation shall be determined by multiplying the emission factor supplied by the permittee (0.01892 lb CO/MMBtu) by the actual fuel heat input (MMBtu/yr) and dividing by 2000 lbs/ton. During Phase II, compliance with the annual emission limitation shall be determined by summing the emissions demonstrated through the record keeping required in condition III.11(CEM measured emissions) with the start-up and shut-down emissions. The annual emissions associated with start-up and shut-down shall be determined using the record keeping required in condition III.9. and the following calculation.

Annual Startup / Shutdown Emissions (tpy) = [(# of cold starts x 1101 lbs. per start) + (# of warm starts x 1127 lbs. per start) + (# of hot starts x 349 lbs. per start)] / 2000 lbs. per ton

f. Emission Limitation - ammonia (NH<sub>3</sub>)

ammonia (NH<sub>3</sub>) emissions shall not exceed:

**Phase II:**

26.0 lbs/hr without duct burner firing

30.6 lbs/hr with duct burner firing

123.1 tons per year

Applicable Compliance Method

Compliance with the lbs/hr emission limitation shall be demonstrated by multiplying the emission factor provided by the permittee (0.0149 lb ammonia/MMBtu without duct burner firing; 0.01454 lb ammonia/MMBtu with duct burner firing) by the associated fuel heat input (MMBtu/hr). If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitation shall be determined by multiplying the aforementioned emission rate (lb/MMBtu) by the associated total actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

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g. Emission Limitation - formaldehyde

formaldehyde emissions shall not exceed:

**Phase I:**

0.19 lbs/hr  
0.16 tons per year

**Phase II:**

0.19 lbs/hr without duct burner firing  
0.21 lbs/hr with duct burner firing  
0.87 tons per year

Applicable Compliance Method

Compliance with the lbs/hr emission limitations shall be demonstrated by the performance testing described in condition V.1. Compliance with the annual emission limitation shall be determined by multiplying the emission rates (in lb/MMBtu as determined by taking the allowable emission rate in lb/hr divided by the maximum heat input in MMBtu/hr) for operation with and without the duct burner firing by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

h. Emission Limitation - sulfuric acid (H<sub>2</sub>SO<sub>4</sub>)

sulfuric acid emissions shall not exceed:

**Phase I:**

0.48 lbs/hr  
0.41 tons per year

**Phase II:**

0.48 lbs/hr without duct burner firing  
0.56 lbs/hr with duct burner firing  
2.3 tons per year

Applicable Compliance Method

Compliance with the lb/hr emission limitation shall be demonstrated by multiplying the emission factor supplied by the permittee (0.000275 lb sulfuric acid/MMBtu heat input without duct burner firing; 0.000266 lb sulfuric acid/MMBtu heat input with duct burner firing) by the associated fuel heat input (MMBtu/hr). If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitation shall be determined by multiplying the aforementioned emission rates (lb/MMBtu) by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

i. Emission Limitation

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average.

Applicable Compliance Method

Compliance with the visible emissions limitation established by this permit shall be determined by Method 9, 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.

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**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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<b>PHASE I</b>		
P001 - GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine	None	None
<b>PHASE II</b>		
P001 - GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine with Duct Firing Operated in Combined Cycle Mode and Controlled by Selective Catalytic Reduction (SCR)	None	None

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (P001) was evaluated based on actual materials (typically coatings and clean up materials) and the design parameters of the emissions unit's

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exhaust system, as specified by the permittee in the air permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy (Air Toxic Policy) was applied for each pollutant emitted by this emissions 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 to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling:

Pollutant: Formaldehyde

TLV (ug/m<sup>3</sup>): 273 (Converted from the STEL)

Maximum Hourly Emission Rate (lbs/hr): 0.70\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 1.16MAGLC (ug/m<sup>3</sup>): 3.68

Pollutant: Sulfuric Acid

TLV (ug/m<sup>3</sup>): 1000

Maximum Hourly Emission Rate (lbs/hr): 1.68\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 1.74MAGLC (ug/m<sup>3</sup>): 10.0

Pollutant: Ammonia

TLV (ug/m<sup>3</sup>): 17000

Maximum Hourly Emission Rate (lbs/hr): 91.8\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 94.7MAGLC (ug/m<sup>3</sup>): 180

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

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

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exhaust flow, changes in stack height, changes in stack diameter, etc.).

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.

#### **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.

<u>Operations, Property, and/or Equipment</u>		
<p><b>PHASE I</b></p> <p>P002 - GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine</p>		<p><b>PHASE II</b></p> <p>P002 - GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine with Duct Firing Operated in Combined Cycle Mode and Controlled by Selective Catalytic Reduction (SCR)</p>

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Applicable  
Rules/Requirements

OAC Rule 3745-31-05  
(A)(3)

OAC Rule 3745-31-05 (A)(3)

40 CFR part 60, Subpart GG

OAC Rule 3745-18-06(F)

OAC Rule 3745-17-11 (B)(4)

OAC Rule 3745-17-07(A)

OAC Rule 3745-31-05  
(A)(3)

40 CFR 52.21  
OAC rule 3745-31- (13) thru (20)

OAC Rule 3745-31-05 (A)(3)

OAC Rule 3745-31-05  
(A)(3)

OAC Rule 3745-31-05 (A)(3)

40 CFR part 60, Subpart GG

40 CFR part 60, Subpart Da

OAC Rule 3745-18-06(F)

OAC Rule 3745-17-11 (B)(4)

OAC Rule 3745-17-07(A)

40 CFR 52.21

OAC Rule 3745-31- (13) thru (20)

40 CFR Part 75

OAC Rule 3745-103

OAC Rule 3745-31-05  
(A)(3)

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Applicable Emissions  
Limitations/Control  
Measures

The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart GG, OAC rule 3745-18-06(F), 3745-17-11(B)(4), OAC rule 3745-17-07(A), 40 CFR 52.21, and OAC 3745-31-(13) thru (20).

**PHASE I EMISSION LIMITS**

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 9.0 ppmvd at 15% Oxygen and 64.0 lbs/hr

particulate matter (PM) emissions shall not exceed 18.0 lbs/hr

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 12.0 lbs/hr

carbon monoxide (CO) emissions shall not exceed 9.0 ppmvd and 33.0 lbs/hr

volatile organic compounds (VOC) emissions shall not exceed 3.2 lbs/hr

formaldehyde emissions shall

not exceed  
0.19 lbs/hr

sulfuric acid emissions shall not exceed  
0.48 lbs/hr

**TOTAL TONS PER YEAR -  
PHASE I  
(limited to 2,965,310 MMBtu/yr  
fuel heat input)**

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 54.4 tons per year

particulate matter (PM) emissions shall not exceed 15.3 tons per year

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 10.2 tons per year

carbon monoxide (CO) emissions shall not exceed 28.1 tons per year

volatile organic compounds (VOC) emissions shall not exceed 2.7 tons per year

formaldehyde emissions shall not exceed 0.16 tons per year

sulfuric acid emissions shall not exceed  
0.41 tons per year

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average

Operational restriction, see Item A.II.1.

See Item A.I.2.b.

See Item A.I.2.a.

See Item A.I.2.a.

See Item A.I.2.a.

Operational restriction, see Item A.II.3.

The tons per rolling 12-month period shall not exceed :

NO<sub>x</sub> - 54.4

SO<sub>2</sub> - 10.2

PM - 15.3

CO - 28.1

VOC - 2.7

**EMISSION LIMITS WITHOUT  
DUCT BURNER FIRING - PHASE II**

The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart GG, OAC rule 3745-18-06(F), 3745-17-11(B)(4), OAC rule 3745-17-07(A), 40 CFR 52.21, and OAC 3745-31- (13) thru (20).

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 3.5 ppmvd at 15% Oxygen and 25.0 lbs/hr

particulate matter (PM) emissions shall not exceed 21.0 lbs/hr

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 12.0 lbs/hr

carbon monoxide (CO) emissions shall not

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exceed 9.0 ppmvd and 33.0 lbs/hr

volatile organic compounds (VOC) emissions shall not exceed 3.2 lbs/hr

ammonia (NH<sub>3</sub>) emissions shall not exceed 26.0 lbs/hr

formaldehyde emissions shall not exceed 0.19 lbs/hr

sulfuric acid emissions shall not exceed 0.48 lbs/hr

**EMISSION LIMITS WITH DUCT BURNER FIRING - PHASE II**

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), 40 CFR 52.21, and OAC 3745-31-(13) thru (20).

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 3.5 ppmvd at 15% Oxygen and 30.0 lbs/hr

particulate matter (PM) emissions shall not exceed 25.0 lbs/hr

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 14.0 lbs/hr  
(duct burner limited to 1.44 x 10<sup>6</sup> MMBtu per year fuel heat input)

carbon monoxide (CO) emissions shall not exceed 15.0 ppmvd and 69.0 lbs/hr

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 146.9 tons per year

particulate matter (PM) emissions shall not exceed 100.0 tons per year

volatile organic compounds (VOC) emissions shall not exceed 6.8 lbs/hr

ammonia (NH<sub>3</sub>) emissions shall not exceed 30.6 lbs/hr

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 56.6 tons per year

carbon monoxide (CO) emissions shall not exceed 366.6 tons per year

formaldehyde emissions shall not exceed 0.21 lbs/hr

volatile organic compounds (VOC) emissions shall not exceed 31.8 tons per year

sulfuric acid emissions shall not exceed 0.56 lbs/hr

ammonia (NH<sub>3</sub>) emissions shall not exceed 123.1 tons per year

**STARTUP AND SHUTDOWN EMISSIONS - PHASE II** (see Item A.II.2.)

formaldehyde emissions shall not exceed 0.87 tons per year

sulfuric acid emissions shall not exceed 2.3 tons per year

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 27.4 tons per year

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average

carbon monoxide (CO) emissions shall not exceed 150.1 tons per year

Operational restriction, see Item A.II.1.

volatile organic compounds (VOC) emissions shall not exceed 10.6 tons per year

See Item A.I.2.b.

**TOTAL TONS PER YEAR INCLUDING STARTUP / SHUTDOWN PERIODS - PHASE II**

See Item A.I.2.a.

See Item A.I.2.a.

See Item A.I.2.a.

See Item A.I.2.a.

Operational restriction, see  
Item A.II.4.

The tons per rolling  
12-month period shall not  
exceed :

NO<sub>x</sub> - 146.9

SO<sub>2</sub> - 56.6

PM - 100.0

CO - 366.6

VOC - 31.8

See Item A.I.2.c.

See Item A.I.2.c.

## **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 3745-31-05.
- 2.b** The emissions limits based on this applicable rule are equivalent to or less stringent than the limits established pursuant to OAC rule 3745-31-05. 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** If the permittee is subject to the requirements of 40 CFR Part 75 concerning acid rain, the permittee shall ensure that any effected 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.

## **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.** Startup and shutdown shall be defined as when the unit is running at less than 50% of electric load, but under no circumstances shall startups exceed 250 minutes in duration and shutdowns shall not exceed 2 hours in duration. The total of all hot, warm and cold startups (as defined below) and shutdowns shall be limited to 286 cycles (one startup and one shutdown) per year.

Hot Start - startup occurs within eight (8) hours after plant shutdown

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Warm Start - startup occurs between eight (8) hours to seventy-two (72) hours after a plant shutdown

Cold Start - startup occurs more than seventy-two (72) hours after a plant shutdown

Each startup and shutdown shall be limited to the following:

<u>Pollutant</u>	<u>Total lbs / Cycle</u>
NOx	418
CO	1127
VOC	97

During Phase I, startup / shutdown emissions are not anticipated to increase above levels defined during normal operation of the simple cycle turbines.

3. During Phase I, the maximum hourly fuel heat input for emission unit P002 shall not exceed 1744.3 MMBtu/hr and the annual maximum fuel heat input shall not exceed 2,965,310 MMBtu per year based upon a rolling, 12-month summation. Due to this operational restriction, CEMs will not be installed until Phase II.

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

Month	Cumulative Fuel Heat Input (MMBtu)
1	1,297,759
1-2	2,595,518
1-3	2,965,310
1-4	2,965,310
1-5	2,965,310
1-6	2,965,310
1-7	2,965,310
1-8	2,965,310
1-9	2,965,310
1-10	2,965,310
1-11	2,965,310
1-12	2,965,310

If Phase I extends beyond the first 12 calendar months following the startup of emissions unit P002, compliance with the annual fuel heat input restriction shall be based on a rolling, 12-month summation.

4. During Phase II, the maximum hourly combustion turbine fuel heat input shall not exceed 1744.3 MMBtu/hr.

The maximum hourly fuel heat input of the duct burner for emission unit P002 shall not exceed 360 MMBtu/hr. The maximum annual fuel heat input of the duct burner shall not exceed  $1.44 \times 10^6$  MMBtu per year, based upon a rolling, 12-month summation.

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To ensure enforceability during the first 12 calendar months following the startup of the duct burner, the permittee shall not exceed the monthly duct burner fuel heat input restrictions specified in the following table:

Month	Cumulative Fuel Heat Input (MMBtu)
1	$0.26784 \times 10^6$
1-2	$0.53568 \times 10^6$
1-3	$0.80352 \times 10^6$
1-4	$1.07136 \times 10^6$
1-5	$1.44 \times 10^6$
1-6	$1.44 \times 10^6$
1-7	$1.44 \times 10^6$
1-8	$1.44 \times 10^6$
1-9	$1.44 \times 10^6$
1-10	$1.44 \times 10^6$
1-11	$1.44 \times 10^6$
1-12	$1.44 \times 10^6$

After the first 12 calendar months following the startup of the duct burner, compliance with the annual fuel heat input restriction shall be based on a rolling, 12-month summation.

**5. Continuous NO<sub>x</sub> Monitoring - Certified Systems**  
Statement of Certification (Phase II Only)

Prior to the installation of the continuous NO<sub>x</sub> monitoring system, 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 6 for approval by the Ohio EPA, Central Office.

Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of such equipment pursuant to the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 6, and 40 CFR Part 75. Personnel from the appropriate Ohio EPA District Office or local air agency 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, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the

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continuous NO<sub>x</sub> monitoring system 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 6, and 40 CFR Part 75.

6. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NO<sub>x</sub> monitoring system designed to ensure continuous valid and representative readings of NO<sub>x</sub> 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. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.

7. Continuous CO Monitoring - Certified Systems  
Statement of Certification (Phase II Only)

Prior to the installation of the continuous CO monitoring system, 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 4 and 6 for approval by the Ohio EPA, Central Office.

Within 60 days after achieving the maximum production rate at which the emissions 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 CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the appropriate Ohio EPA District Office or local air agency 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, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4 and 6.

8. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

9. Continuous O<sub>2</sub> or CO<sub>2</sub> Monitoring - Certified Systems  
Statement of Certification (Phase II Only)

Prior to the installation of the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system, 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 3 for approval by the Ohio EPA, Central Office.

Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of such equipment pursuant to the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 3, and 40 CFR Part 75. Personnel from the appropriate Ohio EPA District Office or local air agency 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, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office.

Certification of the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system 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 3, and 40 CFR Part 75.

10. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system designed to ensure continuous valid and representative readings of O<sub>2</sub> or CO<sub>2</sub> 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. The quality assurance/quality control plan and a logbook dedicated to the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system must be kept on site and available for inspection during regular office hours.

### III. Monitoring and/or Recordkeeping Requirements

1. **Phase I and II:** The permittee shall maintain monthly records of the following information for each emissions unit:
- The natural gas usage rate for each month (in standard cubic feet).
  - Hours of operation of the combustion turbine
  - Hours of operation of the duct burner (Phase II)
  - Monthly fuel heat input (MMBtu) to the combustion turbine
  - Monthly fuel heat input (MMBtu) to the duct burner (Phase II)

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- f. During the first 12 calendar months of operation, the permittee shall also record the cumulative fuel heat input to each combustion turbine and duct burner. Beginning after 12 months of operation of the emission unit, records of the rolling, 12-month summation of fuel heat input shall be maintained.
2. **Phase I and II:** The permittee shall maintain hourly records of the following information for each emissions unit:
- a. Hourly fuel heat input (MMBtu) to the combustion turbine
  - b. Hourly fuel heat input (MMBtu) to the duct burner (Phase II)
3. **Phase II:** The permittee shall operate and maintain existing equipment to continuously monitor and record NO<sub>x</sub> from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements of the appropriate sections specified in 40 CFR Part 60.13 and 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous NO<sub>x</sub> monitoring system including, but not limited to, parts per million NO<sub>x</sub> on an instantaneous (one-minute) basis, emissions of NO<sub>x</sub> in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

4. **Phase II:** The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, annual, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

5. **Phase II:** The permittee shall operate and maintain equipment to continuously monitor and record O<sub>2</sub> or CO<sub>2</sub> from this emissions unit in percent O<sub>2</sub> or CO<sub>2</sub>. Such continuous monitoring and recording equipment shall comply with the requirements in the appropriate sections specified in 40 CFR Part 60.13 and 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system including, but not limited to, percent O<sub>2</sub> or CO<sub>2</sub> on an instantaneous (one-minute) basis, emissions of O<sub>2</sub> or CO<sub>2</sub> in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

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6. **Phase II:** The permittee shall install, calibrate, operate, and maintain continuous monitoring systems to monitor and record the average hourly fuel consumption of the combustion turbine and duct burner. The fuel flow monitoring systems comply with the requirements of 40 CFR Part 75, Appendix D.
7. **Phase I and II:** The permittee shall monitor the sulfur content and gross calorific value of the fuel being fired in the combustion turbine and duct burner. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.
8. **Phase II:** 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 A.III.6 and fuel gross calorific value as determined in term A.III.7. The heat input rate shall be calculated in accordance with the procedures in Section 5 of 40 CFR Part 75, Appendix F.
9. **Phase II:** The permittee shall maintain records of the following information for each emissions unit:
  - a. Number of startups, type of startup (hot, warm or cold) and the duration of each startup.
  - b. Number of shutdowns, and the duration of each shutdown.
  - c. During the first 12 calendar months of operation, the permittee shall also record the cumulative number of startups and shutdowns and the associated startup and shutdown emissions (NO<sub>x</sub>, CO and VOC) for each emissions unit calculated as described in Item V.2.(a,d and e). Beginning after 12 months of operation of the emission unit, records of the rolling, 12-month summation of the number of startups and shutdowns and the associated startup and shutdown emissions (NO<sub>x</sub>, CO and VOC) shall be maintained.
10. **Phase II:** The permittee shall maintain hourly records of the following information for this emissions unit:

in lb(s)/hr emissions rate for NO<sub>x</sub> and CO as obtained from terms III.3. and III.4. based upon an hourly averaging period as allowed in the appropriate sections of 40 CFR Part 60.
11. **Phase II:** The permittee shall maintain monthly records of the following information for this emissions unit:
  - a. the operating hours;
  - b. during the first 12 calendar months of operation, the permittee shall record the cumulative

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operating hours for each calendar month; and

- c. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the operating hours.
- d. during the first 12 calendar months of operation, the cumulative NO<sub>x</sub> and CO emissions, in tons (obtained by summing the values recorded under condition III.10. and dividing by 2000); and
- e. beginning after the first 12 calendar months of operation, the rolling, 12-month NO<sub>x</sub> and CO emissions, in tons

## 12. 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 of notice is by mail, in which case the effective date of the permit shall be 33 days after the service of notice; and (2) if an appeal is made to the Environmental Appeals Board of the United States 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

## IV. Reporting Requirements - Phase I and II

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurred.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the Phase I hourly and rolling, 12-month allowable combustion turbine fuel heat input levels and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative combustion turbine heat input levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).

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3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the Phase II hourly combustion turbine fuel heat input limitation and the hourly and rolling, 12-month duct burner fuel heat input limitations and, for the first 12 calendar months of operation, all exceedances of the maximum cumulative duct burner fuel heat input levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
4. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of  $NO_x$  values in excess of the applicable limits specified in 40 CFR Part 76 and any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total  $NO_x$  emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any continuous  $NO_x$  monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

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 emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions 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.

5. 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 appropriate Ohio EPA District Office or local air agency within 30 days following the end of each calendar quarter in a manner prescribed by the Director.
6. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and

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40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total 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 appropriate Ohio EPA District Office or local air agency documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

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 emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions 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, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

7. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting all instances of continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report. These quarterly 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.
8. The permittee shall submit 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).
9. The permittee shall submit deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the startup and shutdown requirements of condition II.2. above or the annual startup and shutdown emissions limitations calculated as described in Item V.2.(a,d and e). These reports are due by the date described in Part I - General Terms and

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Conditions of this permit under section (A)(2).

10. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess emissions reports for emissions unit P002 in accordance with this permit.
11. This emissions 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, 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

Ohio Environmental Protection Agency  
Southeast District Office  
Division of Air Pollution Control  
2195 Front Street  
Logan, Ohio 43138

## V. Testing Requirements - Phase I and II

1. The permittee shall conduct, or have conducted, emission testing for this emissions 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 emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.
  - b. The emission testing shall be conducted to demonstrate compliance with the NO<sub>x</sub> and CO

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outlet concentration, and the mass emissions limitations for NO<sub>x</sub>,\* CO, Formaldehyde, VOC, PM and visible emission limitations.

- c. The following test method(s) shall be employed to demonstrate compliance with the above emissions limitations: for NO<sub>x</sub>, Method 20 of 40 CFR Part 60, Appendix A; for PM, Method 5 of 40 CFR Part 60, Appendix A; for visible emission limitations, Method 9 of 40 CFR Part 60, Appendix A; for Formaldehyde, SW-846 Method 0011; for VOC Method 25 of 40 CFR Part 60, Appendix A; and for CO Method 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity with and without duct burner firing, unless otherwise specified or approved by Ohio EPA or 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 Ohio EPA, Southeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Southeast District Office refusal to accept the results of the emission test(s).
- f. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), 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 emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southeast District Office 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 Ohio EPA, Southeast District Office.

\* Using the test methods and procedures required under 40 CFR Part 60.335.

2. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:
  - a. Emission Limitation - NO<sub>x</sub>

**Phase I:**

NO<sub>x</sub> emissions shall not exceed 9.0 ppmvd at 15% Oxygen  
64.0 lbs/hr  
54.4 tons per year

**Phase II:**

NO<sub>x</sub> emissions shall not exceed 3.5 ppmvd at 15% Oxygen  
25.0 lbs/hr without duct burner firing  
30.0 lbs/hr with duct burner firing  
146.9 tons per year, which includes 27.4 tpy for startups and shutdowns

Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1. and continual compliance with those limitations shall be demonstrated by the use of the CEM (Phase II) in condition III.3. based upon an hourly averaging period as allowed in 40 CFR Part 60. During Phase I, compliance with the annual emission limitation shall be determined by multiplying the emission factor supplied by the permittee (0.0367 lb NO<sub>x</sub>/MMBtu) by the actual fuel heat input (MMBtu/yr) and dividing by 2000 lbs/ton. During Phase II, compliance with the annual emission limitation shall be determined by summing the emissions demonstrated through the record keeping required in condition III.11(CEM measured emissions) with the start-up and shut-down emissions. The annual emissions associated with start-up and shut-down shall be determined using the record keeping required in condition III.9. and the following calculation.

Annual Startup / Shutdown Emissions (tpy) = [(# of cold starts x 418 lbs. per start) + (# of warm starts x 144 lbs. per start) + (# of hot starts x 114 lbs. per start)] / 2000 lbs. per ton

b. Emission Limitation - PM

PM emissions shall not exceed:

**Phase I:**

18.0 lbs/hr  
15.3 tons per year

**Phase II:**

21.0 lbs/hr without duct burner firing  
25.0 lbs/hr with duct burner firing

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100.0 tons per year

Applicable Compliance Method

Compliance with the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1. Compliance with the annual emission limitation shall be determined by multiplying the emission rates (in lb/MMBtu as determined by taking the allowable emission rate in lb/hr divided by the maximum heat input in MMBtu/hr) for operation with and without the duct burner firing by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

c. Emission Limitation - SO<sub>2</sub>

SO<sub>2</sub> emissions shall not exceed:

**Phase I:**

12.0 lbs/hr  
10.2 tons per year

**Phase II:**

12.0 lbs/hr without duct burner firing  
14.0 lbs/hr with duct burner firing  
56.6 tons per year

Applicable Compliance Method

Compliance with the hourly emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 8. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitation shall be determined by multiplying the emission factor supplied by the permittee (0.0069 lb/MMBtu without duct burner firing; 0.00665 lb/MMBtu with duct burner firing) by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

d. Emission Limitation - VOC

VOC emissions shall not exceed:

**Phase I:**

3.2 lbs/hr  
 2.7 tons per year

**Phase II:**

3.2 lbs/hr without duct burner firing  
 6.8 lbs/hr with duct burner firing  
 31.8 tons per year, which includes 10.6 tpy for startups and shutdowns

Applicable Compliance Method

Compliance with the lbs/hr limitations shall be demonstrated by the performance testing described in condition V.1. Compliance with the annual emission limitation shall be determined by multiplying the emission rates (in lb/MMBtu as determined by taking the allowable emission rate in lb/hr divided by the maximum heat input in MMBtu/hr) for operation with and without the duct burner firing by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton, summing the values and adding the start-up and shut-down emissions. The annual emissions associated with start-up and shut-down shall be determined using the record keeping required in condition III.9. and the following calculation.

Annual Startup / Shutdown Emissions (tpy) = [(# of cold starts x 97 lbs. per start) + (# of warm starts x 74 lbs. per start) + (# of hot starts x 34 lbs. per start)] / 2000 lbs. per ton

e. Emission Limitation - CO

CO emissions shall not exceed:

**Phase I:**

9.0 ppmvd  
 33.0 lbs/hr  
 28.1 tons per year

**Phase II:**

9.0 ppmvd without duct burner firing  
 15.0 ppmvd with duct burner firing  
 33.0 lbs/hr without duct burner firing  
 69.0 lbs/hr with duct burner firing  
 366.6 tons per year, which includes 150.1 tpy for startups and shutdowns

Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission

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limitations shall be demonstrated by the performance testing as described in condition V.1 and continual compliance with those limitations shall be demonstrated by the use of the CEM (Phase II) in condition III.4. based upon an hourly averaging period as allowed in 40 CFR Part 60. During Phase I, compliance with the annual emission limitation shall be determined by multiplying the emission factor supplied by the permittee (0.01892 lb CO/MMBtu) by the actual fuel heat input (MMBtu/yr) and dividing by 2000 lbs/ton. During Phase II, compliance with the annual emission limitation shall be determined by summing the emissions demonstrated through the record keeping required in condition III.11(CEM measured emissions) with the start-up and shut-down emissions. The annual emissions associated with start-up and shut-down shall be determined using the record keeping required in condition III.9. and the following calculation.

$$\text{Annual Startup / Shutdown Emissions (tpy)} = [(\# \text{ of cold starts} \times 1101 \text{ lbs. per start}) + (\# \text{ of warm starts} \times 1127 \text{ lbs. per start}) + (\# \text{ of hot starts} \times 349 \text{ lbs. per start})] / 2000 \text{ lbs. per ton}$$

f. Emission Limitation - ammonia (NH<sub>3</sub>)

ammonia (NH<sub>3</sub>) emissions shall not exceed:

**Phase II:**

26.0 lbs/hr without duct burner firing

30.6 lbs/hr with duct burner firing

123.1 tons per year

Applicable Compliance Method

Compliance with the lbs/hr emission limitation shall be demonstrated by multiplying the emission factor provided by the permittee (0.0149 lb ammonia/MMBtu without duct burner firing; 0.01454 lb ammonia/MMBtu with duct burner firing) by the associated fuel heat input (MMBtu/hr). If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitation shall be determined by multiplying the aforementioned emission rate (lb/MMBtu) by the associated total actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

g. Emission Limitation - formaldehyde

formaldehyde emissions shall not exceed:

**Phase I:**

0.19 lbs/hr  
0.16 tons per year

**Phase II:**

0.19 lbs/hr without duct burner firing  
0.21 lbs/hr with duct burner firing  
0.87 tons per year

Applicable Compliance Method

Compliance with the lbs/hr emission limitations shall be demonstrated by the performance testing described in condition V.1. Compliance with the annual emission limitation shall be determined by multiplying the emission rates (in lb/MMBtu as determined by taking the allowable emission rate in lb/hr divided by the maximum heat input in MMBtu/hr) for operation with and without the duct burner firing by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

h. Emission Limitation - sulfuric acid (H<sub>2</sub>SO<sub>4</sub>)

sulfuric acid emissions shall not exceed:

**Phase I:**

0.48 lbs/hr  
0.41 tons per year

**Phase II:**

0.48 lbs/hr without duct burner firing  
0.56 lbs/hr with duct burner firing  
2.3 tons per year

Applicable Compliance Method

Compliance with the lb/hr emission limitation shall be demonstrated by multiplying the emission factor supplied by the permittee (0.000275 lb sulfuric acid/MMBtu heat input without duct burner firing; 0.000266 lb sulfuric acid/MMBtu heat input with duct burner firing) by the associated fuel heat input (MMBtu/hr). If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitation shall be determined by multiplying the aforementioned emission rates (lb/MMBtu) by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

i. Emission Limitation

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average.

Applicable Compliance Method

Compliance with the visible emissions limitation established by this permit shall be determined by Method 9, 40 CFR Part 60, Appendix A.

**VI. Miscellaneous Requirements**

1. In accordance with good engineering practices, the SCR unit on emissions unit P002 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.

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Emissions Unit ID: P002

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**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<b>PHASE I</b>		
P002 - GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine	None	None
<b>PHASE II</b>		
P002 - GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine with Duct Firing Operated in Combined Cycle Mode and Controlled by Selective Catalytic Reduction (SCR)	None	None

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

- The permit to install for this emissions unit (P002) was evaluated based on actual materials

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(typically coatings and clean up materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the air permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy (Air Toxic Policy) was applied for each pollutant emitted by this emissions 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 to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling:

Pollutant: Formaldehyde

TLV (ug/m<sup>3</sup>): 273 (Converted from the STEL)

Maximum Hourly Emission Rate (lbs/hr): 0.70\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 1.16

MAGLC (ug/m<sup>3</sup>): 3.68

Pollutant: Sulfuric Acid

TLV (ug/m<sup>3</sup>): 1000

Maximum Hourly Emission Rate (lbs/hr): 1.68\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 1.74

MAGLC (ug/m<sup>3</sup>): 10.0

Pollutant: Ammonia

TLV (ug/m<sup>3</sup>): 17000

Maximum Hourly Emission Rate (lbs/hr): 91.8\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 94.7

MAGLC (ug/m<sup>3</sup>): 180

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

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.).

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.

#### **IV. Reporting Requirements**

None

#### **V. Testing Requirements**

None

#### **VI. Miscellaneous Requirements**

None

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Emissions Unit ID: P003

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**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.

<u>Operations, Property, and/or Equipment</u>	
<b>PHASE I</b>	
P003 - GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine	

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**PHASE II**

P003 - GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine with Duct Firing Operated in Combined Cycle Mode and Controlled by Selective Catalytic Reduction (SCR)

Applicable Rules/Requirements

OAC Rule 3745-31-05 (A)(3)

40 CFR part 60, Subpart GG

OAC rule 3745-18-06(F)

OAC Rule 3745-17-11 (B)(4)

OAC Rule 3745-17-07(A)

40 CFR 52.21

OAC Rule 3745-31- (13) thru (20)

OAC Rule 3745-31-05 (A)(3)

40 CFR part 60, Subpart GG

40 CFR part 60, Subpart Da

OAC Rule 3745-31-05 (A)(3)

OAC Rule 3745-18-06(F)

OAC Rule 3745-17-11 (B)(4)

OAC Rule 3745-17-07(A)

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40 CFR 52.21

OAC Rule 3745-31- (13)  
thru (20)

Applicable Emissions  
Limitations/Control Measures

The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart GG, OAC rule 3745-18-06(F), 3745-17-11(B)(4), OAC rule 3745-17-07(A), 40 CFR 52.21, and OAC 3745-31- (13) thru (20).

**PHASE I EMISSION LIMITS**

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 9.0 ppmvd at 15% Oxygen and 64.0 lbs /hr

particulate matter (PM) emissions shall not exceed 18.0 lbs/hr

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 12.0 lbs/hr

carbon monoxide (CO) emissions shall not exceed 9.0 ppmvd and 33.0 lbs/hr

volatile organic compounds (VOC) emissions shall not exceed 3.2 lbs/hr

formaldehyde emissions shall not exceed 0.19 lbs/hr

sulfuric acid emissions shall not exceed 0.48 lbs/hr

**TOTAL TONS PER YEAR - PHASE I  
(limited to 2,965,310 MMBtu/yr fuel  
heat input)**

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 54.4 tons per year

particulate matter (PM) emissions shall not exceed 15.3 tons per year

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 10.2 tons per year

carbon monoxide (CO) emissions shall not exceed 28.1 tons per year

volatile organic compounds (VOC) emissions shall not exceed 2.7 tons per year

formaldehyde emissions shall not exceed 0.16 tons per year

sulfuric acid emissions shall not exceed 0.41 tons per year

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average

Operational restriction, see Item A.II.1.

See Item A.I.2.b.

See Item A.I.2.a.

See Item A.I.2.a.

See Item A.I.2.a.

Operational restriction, see Item A.II.3.

40 CFR Part 75

OAC Rule 3745-103

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The tons per rolling 12-month period shall not exceed :

- NO<sub>x</sub> - 54.4
- SO<sub>2</sub> - 10.2
- PM - 15.3
- CO - 28.1
- VOC - 2.7

**EMISSION LIMITS WITHOUT DUCT BURNER FIRING - PHASE II**

The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart GG, OAC rule 3745-18-06(F), 3745-17-11(B)(4), OAC rule 3745-17-07(A), 40 CFR 52.21, and OAC 3745-31-(13) thru (20).

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 3.5 ppmvd at 15% Oxygen and 25.0 lbs /hr

particulate matter (PM) emissions shall not exceed 21.0 lbs/hr

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 12.0 lbs/hr

carbon monoxide (CO) emissions shall not exceed

9.0 ppmvd and 33.0 lbs/hr

volatile organic compounds (VOC) emissions shall not exceed 3.2 lbs/hr

ammonia (NH<sub>3</sub>) emissions shall not exceed 26.0 lbs/hr

formaldehyde emissions shall not exceed 0.19 lbs/hr

sulfuric acid emissions shall not exceed 0.48 lbs/hr

**EMISSION LIMITS WITH DUCT BURNER FIRING - PHASE II**

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), 40 CFR 52.21, and OAC 3745-31-(13) thru (20).

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 3.5 ppmvd at 15% Oxygen and 30.0 lbs /hr

particulate matter (PM) emissions shall not exceed 25.0 lbs/hr

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 14.0 lbs/hr

carbon monoxide (CO) emissions shall not exceed 15.0 ppmvd and 69.0 lbs/hr

volatile organic compounds (VOC) emissions shall not exceed 6.8 lbs/hr

ammonia (NH<sub>3</sub>) emissions shall not exceed 30.6 lbs/hr

formaldehyde emissions shall not exceed 0.21 lbs/hr

sulfuric acid emissions shall not exceed 0.56 lbs/hr

**STARTUP AND SHUTDOWN EMISSIONS - PHASE II (see Item A.II.2.)**

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 27.4 tons per year

carbon monoxide (CO) emissions shall not exceed 150.1 tons per year

volatile organic compounds (VOC) emissions shall not exceed 10.6 tons per year

**TOTAL TONS PER YEAR INCLUDING STARTUP / SHUTDOWN PERIODS - PHASE II (duct burner limited to 1.44 x 10<sup>6</sup> MMBtu per year fuel heat input)**

nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 146.9 tons per year

particulate matter (PM) emissions shall not exceed 100.0 tons per year

<p>sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 56.6 tons per year</p>	<p>The tons per rolling 12-month period shall not exceed :</p>
<p>carbon monoxide (CO) emissions shall not exceed 366.6 tons per year</p>	<p>NOx - 146.9 SO<sub>2</sub> - 56.6 PM - 100.0 CO - 366.6 VOC - 31.8</p>
<p>volatile organic compounds (VOC) emissions shall not exceed 31.8 tons per year</p>	<p>See Item A.I.2.c. See Item A.I.2.c.</p>
<p>ammonia (NH<sub>3</sub>) emissions shall not exceed 123.1 tons per year</p>	
<p>formaldehyde emissions shall not exceed 0.87 tons per year</p>	
<p>sulfuric acid emissions shall not exceed 2.3 tons per year</p>	
<p>Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average</p>	
<p>Operational restriction, see Item A.II.1.</p>	
<p>See Item A.I.2.b.</p>	
<p>See Item A.I.2.a.</p>	
<p>Operational restriction, see Item A.II.4.</p>	

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**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 3745-31-05.
- 2.b** The emissions limits based on this applicable rule are equivalent to or less stringent than the limits established pursuant to OAC rule 3745-31-05. 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** If the permittee is subject to the requirements of 40 CFR Part 75 concerning acid rain, the permittee shall ensure that any effected 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.

**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.** Startup and shutdown shall be defined as when the unit is running at less than 50% of electric load, but under no circumstances shall startups exceed 250 minutes in duration and shutdowns shall not exceed 2 hours in duration. The total of all hot, warm and cold startups (as defined below) and shutdowns shall be limited to 286 cycles (one startup and one shutdown) per year.

Hot Start - startup occurs within eight (8) hours after plant shutdown

Warm Start - startup occurs between eight (8) hours to seventy-two (72) hours after a plant shutdown

Cold Start - startup occurs more than seventy-two (72) hours after a plant shutdown

Each startup and shutdown shall be limited to the following:

<u>Pollutant</u>	<u>Total lbs / Cycle</u>
NOx	418
CO	1127
VOC	97

During Phase I, startup / shutdown emissions are not anticipated to increase above levels defined during normal operation of the simple cycle turbines.

3. During Phase I, the maximum hourly fuel heat input for emission unit P003 shall not exceed 1744.3 MMBtu/hr and the annual maximum fuel heat input shall not exceed 2,965,310 MMBtu per year based upon a rolling, 12-month summation. Due to this operational restriction, CEMs will not be installed until Phase II.

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

Month	Cumulative Fuel Heat Input (MMBtu)
1	1,297,759
1-2	2,595,518
1-3	2,965,310
1-4	2,965,310
1-5	2,965,310
1-6	2,965,310
1-7	2,965,310
1-8	2,965,310
1-9	2,965,310
1-10	2,965,310
1-11	2,965,310
1-12	2,965,310

If Phase I extends beyond the first 12 calendar months following the startup of emissions unit P003, compliance with the annual fuel heat input restriction shall be based on a rolling, 12-month summation.

4. During Phase II, the maximum hourly combustion turbine fuel heat input shall not exceed 1744.3

MMBtu/hr.

The maximum hourly fuel heat input of the duct burner for emission unit P003 shall not exceed 360 MMBtu/hr. The maximum annual fuel heat input of the duct burner shall not exceed  $1.44 \times 10^6$  MMBtu per year, based upon a rolling, 12-month summation.

To ensure enforceability during the first 12 calendar months following the startup of the duct burner, the permittee shall not exceed the monthly duct burner fuel heat input restrictions specified in the following table:

Month	Cumulative Fuel Heat Input (MMBtu)
1	$0.26784 \times 10^6$
1-2	$0.53568 \times 10^6$
1-3	$0.80352 \times 10^6$
1-4	$1.07136 \times 10^6$
1-5	$1.44 \times 10^6$
1-6	$1.44 \times 10^6$
1-7	$1.44 \times 10^6$
1-8	$1.44 \times 10^6$
1-9	$1.44 \times 10^6$
1-10	$1.44 \times 10^6$
1-11	$1.44 \times 10^6$
1-12	$1.44 \times 10^6$

After the first 12 calendar months following the startup of the duct burner, compliance with the annual fuel heat input restriction shall be based on a rolling, 12-month summation.

**5. Continuous NO<sub>x</sub> Monitoring - Certified Systems**  
Statement of Certification (Phase II Only)

Prior to the installation of the continuous NO<sub>x</sub> monitoring system, 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 6 for approval by the Ohio EPA, Central Office.

Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of such equipment pursuant to the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 6, and 40 CFR Part 75. Personnel from the appropriate Ohio EPA District Office or local air agency 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, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio

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EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous NO<sub>x</sub> monitoring system 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 6, and 40 CFR Part 75.

6. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NO<sub>x</sub> monitoring system designed to ensure continuous valid and representative readings of NO<sub>x</sub> 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. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.
7. Continuous CO Monitoring - Certified Systems  
Statement of Certification (Phase II Only)

Prior to the installation of the continuous CO monitoring system, 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 4 and 6 for approval by the Ohio EPA, Central Office.

Within 60 days after achieving the maximum production rate at which the emissions 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 CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the appropriate Ohio EPA District Office or local air agency 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, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4 and 6.

8. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

9. Continuous O<sub>2</sub> or CO<sub>2</sub> Monitoring - Certified Systems  
Statement of Certification (Phase II Only)

Prior to the installation of the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system, 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 3 for approval by the Ohio EPA, Central Office.

Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of such equipment pursuant to the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 3, and 40 CFR Part 75. Personnel from the appropriate Ohio EPA District Office or local air agency 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, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office.

Certification of the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system 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 3, and 40 CFR Part 75.

10. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system designed to ensure continuous valid and representative readings of O<sub>2</sub> or CO<sub>2</sub> 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. The quality assurance/quality control plan and a logbook dedicated to the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system must be kept on site and available for inspection during regular office hours.

### III. Monitoring and/or Recordkeeping Requirements

1. **Phase I and II:** The permittee shall maintain monthly records of the following information for each emissions unit:
- The natural gas usage rate for each month (in standard cubic feet).
  - Hours of operation of the combustion turbine
  - Hours of operation of the duct burner (Phase II)
  - Monthly fuel heat input (MMBtu) to the combustion turbine
  - Monthly fuel heat input (MMBtu) to the duct burner (Phase II)

- f. During the first 12 calendar months of operation, the permittee shall also record the cumulative fuel heat input to each combustion turbine and duct burner. Beginning after 12 months of operation of the emission unit, records of the rolling, 12-month summation of fuel heat input shall be maintained.
2. **Phase I and II:** The permittee shall maintain hourly records of the following information for each emissions unit:
  - a. Hourly fuel heat input (MMBtu) to the combustion turbine
  - b. Hourly fuel heat input (MMBtu) to the duct burner (Phase II)
3. **Phase II:** The permittee shall operate and maintain existing equipment to continuously monitor and record NO<sub>x</sub> from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements of the appropriate sections specified in 40 CFR Part 60.13 and 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous NO<sub>x</sub> monitoring system including, but not limited to, parts per million NO<sub>x</sub> on an instantaneous (one-minute) basis, emissions of NO<sub>x</sub> in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

4. **Phase II:** The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, annual, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

5. **Phase II:** The permittee shall operate and maintain equipment to continuously monitor and record O<sub>2</sub> or CO<sub>2</sub> from this emissions unit in percent O<sub>2</sub> or CO<sub>2</sub>. Such continuous monitoring and recording equipment shall comply with the requirements in the appropriate sections specified in 40 CFR Part 60.13 and 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system including, but not limited to, percent O<sub>2</sub> or CO<sub>2</sub> on an instantaneous (one-minute) basis, emissions of O<sub>2</sub> or CO<sub>2</sub> in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. **Phase II:** The permittee shall install, calibrate, operate, and maintain continuous monitoring systems to monitor and record the average hourly fuel consumption of the combustion turbine and duct burner. The fuel flow monitoring systems comply with the requirements of 40 CFR Part 75, Appendix D.
7. **Phase I and II:** The permittee shall monitor the sulfur content and gross calorific value of the fuel being fired in the combustion turbine and duct burner. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.
8. **Phase II:** 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 A.III.6 and fuel gross calorific value as determined in term A.III.7. The heat input rate shall be calculated in accordance with the procedures in Section 5 of 40 CFR Part 75, Appendix F.
9. **Phase II:** The permittee shall maintain records of the following information for each emissions unit:
  - a. Number of startups, type of startup (hot, warm or cold) and the duration of each startup.
  - b. Number of shutdowns, and the duration of each shutdown.
  - c. During the first 12 calendar months of operation, the permittee shall also record the cumulative number of startups and shutdowns and the associated startup and shutdown emissions (NO<sub>x</sub>, CO and VOC) for each emissions unit calculated as described in Item V.2.(a,d and e). Beginning after 12 months of operation of the emission unit, records of the rolling, 12-month summation of the number of startups and shutdowns and the associated startup and shutdown emissions (NO<sub>x</sub>, CO and VOC) shall be maintained.
10. **Phase II:** The permittee shall maintain hourly records of the following information for this emissions unit:

in lb(s)/hr emissions rate for NO<sub>x</sub> and CO as obtained from terms III.3. and III.4. based upon an hourly averaging period as allowed in the appropriate sections of 40 CFR Part 60.
11. **Phase II:** The permittee shall maintain monthly records of the following information for this emissions unit:
  - a. the operating hours;

- b. during the first 12 calendar months of operation, the permittee shall record the cumulative operating hours for each calendar month; and
- c. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the operating hours.
- d. during the first 12 calendar months of operation, the cumulative NO<sub>x</sub> and CO emissions, in tons (obtained by summing the values recorded under condition III.10. and dividing by 2000); and
- e. beginning after the first 12 calendar months of operation, the rolling, 12-month NO<sub>x</sub> and CO emissions, in tons

## 12. 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 of notice is by mail, in which case the effective date of the permit shall be 33 days after the service of notice; and (2) if an appeal is made to the Environmental Appeals Board of the United States 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

## IV. Reporting Requirements - Phase I and II

- 1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurred.
- 2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the Phase I hourly and rolling, 12-month allowable combustion turbine fuel heat input levels and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative

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combustion turbine heat input levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the Phase II hourly combustion turbine fuel heat input limitation and the hourly and rolling, 12-month duct burner fuel heat input limitations and, for the first 12 calendar months of operation, all exceedances of the maximum cumulative duct burner fuel heat input levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
4. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of  $NO_x$  values in excess of the applicable limits specified in 40 CFR Part 76 and any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total  $NO_x$  emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any continuous  $NO_x$  monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

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 emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions 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.

5. 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 appropriate Ohio EPA District Office or local air agency within 30 days following the end of each calendar quarter in a manner prescribed by the Director.
6. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if

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known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total 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 appropriate Ohio EPA District Office or local air agency documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

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 emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions 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, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

7. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting all instances of continuous O<sub>2</sub> or CO<sub>2</sub> monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report. These quarterly 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.
8. The permittee shall submit 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).
9. The permittee shall submit deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the startup and shutdown requirements of condition II.2. above or the annual startup and shutdown emissions limitations calculated as described in Item V.2.(a,d and e). These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
10. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall

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submit excess emissions reports for emissions unit P003 in accordance with this permit.

- 11.** This emissions 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, 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

Ohio Environmental Protection Agency  
 Southeast District Office  
 Division of Air Pollution Control  
 2195 Front Street  
 Logan, Ohio 43138

## **V. Testing Requirements - Phase I and II**

- 1.** The permittee shall conduct, or have conducted, emission testing for this emissions 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 emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.
  - b. The emission testing shall be conducted to demonstrate compliance with the NO<sub>x</sub> and CO outlet concentration, and the mass emissions limitations for NO<sub>x</sub>,\* CO, Formaldehyde, VOC, PM and visible emission limitations.

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- c. The following test method(s) shall be employed to demonstrate compliance with the above emissions limitations: for NO<sub>x</sub>, Method 20 of 40 CFR Part 60, Appendix A; for PM, Method 5 of 40 CFR Part 60, Appendix A; for visible emission limitations, Method 9 of 40 CFR Part 60, Appendix A; for Formaldehyde, SW-846 Method 0011; for VOC Method 25 of 40 CFR Part 60, Appendix A; and for CO Method 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity with and without duct burner firing, unless otherwise specified or approved by Ohio EPA or 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 Ohio EPA, Southeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Southeast District Office refusal to accept the results of the emission test(s).
- f. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), 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 emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southeast District Office 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 Ohio EPA, Southeast District Office.

\* Using the test methods and procedures required under 40 CFR Part 60.335.

2. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

- a. Emission Limitation - NO<sub>x</sub>

**Phase I:**

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NO<sub>x</sub> emissions shall not exceed 9.0 ppmvd at 15% Oxygen  
 64.0 lbs/hr  
 54.4 tons per year

**Phase II:**

NO<sub>x</sub> emissions shall not exceed 3.5 ppmvd at 15% Oxygen  
 25.0 lbs/hr without duct burner firing  
 30.0 lbs/hr with duct burner firing  
 146.9 tons per year, which includes 27.4 tpy for startups and shutdowns

Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1. and continual compliance with those limitations shall be demonstrated by the use of the CEM (Phase II) in condition III.3. based upon an hourly averaging period as allowed in 40 CFR Part 60. During Phase I, compliance with the annual emission limitation shall be determined by multiplying the emission factor supplied by the permittee (0.0367 lb NO<sub>x</sub>/MMBtu) by the actual fuel heat input (MMBtu/yr) and dividing by 2000 lbs/ton. During Phase II, compliance with the annual emission limitation shall be determined by summing the emissions demonstrated through the record keeping required in condition III.11 (CEM measured emissions) with the start-up and shut-down emissions. The annual emissions associated with start-up and shut-down shall be determined using the record keeping required in condition III.9. and the following calculation.

Annual Startup / Shutdown Emissions (tpy) = [(# of cold starts x 418 lbs. per start) + (# of warm starts x 144 lbs. per start) + (# of hot starts x 114 lbs. per start)] / 2000 lbs. per ton

b. Emission Limitation - PM

PM emissions shall not exceed:

**Phase I:**

18.0 lbs/hr  
 15.3 tons per year

**Phase II:**

21.0 lbs/hr without duct burner firing  
 25.0 lbs/hr with duct burner firing  
 100.0 tons per year

Applicable Compliance Method

Compliance with the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1. Compliance with the annual emission limitation shall be determined by multiplying the emission rates (in lb/MMBtu as determined by taking the allowable emission rate in lb/hr divided by the maximum heat input in MMBtu/hr) for operation with and without the duct burner firing by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

c. Emission Limitation - SO<sub>2</sub>

SO<sub>2</sub> emissions shall not exceed:

**Phase I:**

12.0 lbs/hr  
10.2 tons per year

**Phase II:**

12.0 lbs/hr without duct burner firing  
14.0 lbs/hr with duct burner firing  
56.6 tons per year

Applicable Compliance Method

Compliance with the hourly emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 8. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitation shall be determined by multiplying the emission factor supplied by the permittee (0.0069 lb/MMBtu without duct burner firing; 0.00665 lb/MMBtu with duct burner firing) by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

d. Emission Limitation - VOC

VOC emissions shall not exceed:

**Phase I:**

3.2 lbs/hr  
2.7 tons per year

**Phase II:**

3.2 lbs/hr without duct burner firing  
 6.8 lbs/hr with duct burner firing  
 31.8 tons per year, which includes 10.6 tpy for startups and shutdowns

Applicable Compliance Method

Compliance with the lbs/hr limitations shall be demonstrated by the performance testing described in condition V.1. Compliance with the annual emission limitation shall be determined by multiplying the emission rates (in lb/MMBtu as determined by taking the allowable emission rate in lb/hr divided by the maximum heat input in MMBtu/hr) for operation with and without the duct burner firing by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton, summing the values and adding the start-up and shut-down emissions. The annual emissions associated with start-up and shut-down shall be determined using the record keeping required in condition III.9. and the following calculation.

$$\text{Annual Startup / Shutdown Emissions (tpy)} = [(\# \text{ of cold starts} \times 97 \text{ lbs. per start}) + (\# \text{ of warm starts} \times 74 \text{ lbs. per start}) + (\# \text{ of hot starts} \times 34 \text{ lbs. per start})] / 2000 \text{ lbs. per ton}$$
e. Emission Limitation - CO

CO emissions shall not exceed:

**Phase I:**

9.0 ppmvd  
 33.0 lbs/hr  
 28.1 tons per year

**Phase II:**

9.0 ppmvd without duct burner firing  
 15.0 ppmvd with duct burner firing  
 33.0 lbs/hr without duct burner firing  
 69.0 lbs/hr with duct burner firing  
 366.6 tons per year, which includes 150.1 tpy for startups and shutdowns

Applicable Compliance Method

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Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1 and continual compliance with those limitations shall be demonstrated by the use of the CEM (Phase II) in condition III.4. based upon an hourly averaging period as allowed in 40 CFR Part 60. During Phase I, compliance with the annual emission limitation shall be determined by multiplying the emission factor supplied by the permittee (0.01892 lb CO/MMBtu) by the actual fuel heat input (MMBtu/yr) and dividing by 2000 lbs/ton. During Phase II, compliance with the annual emission limitation shall be determined by summing the emissions demonstrated through the record keeping required in condition III.11 (CEM measured emissions) with the start-up and shut-down emissions. The annual emissions associated with start-up and shut-down shall be determined using the record keeping required in condition III.9. and the following calculation.

Annual Startup / Shutdown Emissions (tpy) = [(# of cold starts x 1101 lbs. per start) + (# of warm starts x 1127 lbs. per start) + (# of hot starts x 349 lbs. per start)] / 2000 lbs. per ton

f. Emission Limitation - ammonia (NH<sub>3</sub>)

ammonia (NH<sub>3</sub>) emissions shall not exceed:

**Phase II:**

26.0 lbs/hr without duct burner firing

30.6 lbs/hr with duct burner firing

123.1 tons per year

Applicable Compliance Method

Compliance with the lbs/hr emission limitation shall be demonstrated by multiplying the emission factor provided by the permittee (0.0149 lb ammonia/MMBtu without duct burner firing; 0.01454 lb ammonia/MMBtu with duct burner firing) by the associated fuel heat input (MMBtu/hr). If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitation shall be determined by multiplying the aforementioned emission rate (lb/MMBtu) by the associated total actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

g. Emission Limitation - formaldehyde

formaldehyde emissions shall not exceed:

**Phase I:**

0.19 lbs/hr

0.16 tons per year

**Phase II:**

0.19 lbs/hr without duct burner firing

0.21 lbs/hr with duct burner firing

0.87 tons per year

Applicable Compliance Method

Compliance with the lbs/hr emission limitations shall be demonstrated by the performance testing described in condition V.1. Compliance with the annual emission limitation shall be determined by multiplying the emission rates (in lb/MMBtu as determined by taking the allowable emission rate in lb/hr divided by the maximum heat input in MMBtu/hr) for operation with and without the duct burner firing by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

h. Emission Limitation - sulfuric acid (H<sub>2</sub>SO<sub>4</sub>)

sulfuric acid emissions shall not exceed:

**Phase I:**

0.48 lbs/hr  
0.41 tons per year

**Phase II:**

0.48 lbs/hr without duct burner firing  
0.56 lbs/hr with duct burner firing  
2.3 tons per year

Applicable Compliance Method

Compliance with the lb/hr emission limitation shall be demonstrated by multiplying the emission factor supplied by the permittee (0.000275 lb sulfuric acid/MMBtu heat input without duct burner firing; 0.000266 lb sulfuric acid/MMBtu heat input with duct burner firing) by the associated fuel heat input (MMBtu/hr). If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitation shall be determined by multiplying the aforementioned emission rates (lb/MMBtu) by the associated actual fuel heat input (MMBtu/yr), dividing by 2000 lbs/ton and summing the values.

i. Emission Limitation

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average.

Applicable Compliance Method

Compliance with the visible emissions limitation established by this permit shall be determined by Method 9, 40 CFR Part 60, Appendix A.

**VI. Miscellaneous Requirements**

1. In accordance with good engineering practices, the SCR unit on emissions unit P003 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.

**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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<b>PHASE I</b>		
P003 - GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine	None	None
<b>PHASE II</b>		
P003 - GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine with Duct Firing Operated in Combined Cycle Mode and Controlled by Selective Catalytic Reduction (SCR)	None	None

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (P003) was evaluated based on actual materials (typically coatings and clean up materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the air permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy (Air Toxic Policy) was applied for each pollutant emitted by this emissions 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 to the Maximum Acceptable Ground-Level Concentration

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(MAGLC). The following summarizes the results of the modeling:

Pollutant: Formaldehyde

TLV (ug/m<sup>3</sup>): 273 (Converted from the STEL)

Maximum Hourly Emission Rate (lbs/hr): 0.70\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 1.16

MAGLC (ug/m<sup>3</sup>): 3.68

Pollutant: Sulfuric Acid

TLV (ug/m<sup>3</sup>): 1000

Maximum Hourly Emission Rate (lbs/hr): 1.68\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 1.74

MAGLC (ug/m<sup>3</sup>): 10.0

Pollutant: Ammonia

TLV (ug/m<sup>3</sup>): 17000

Maximum Hourly Emission Rate (lbs/hr): 91.8\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 94.7

MAGLC (ug/m<sup>3</sup>): 180

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

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

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exhaust flow, changes in stack height, changes in stack diameter, etc.).

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.

#### **IV. Reporting Requirements**

None

#### **V. Testing Requirements**

None

#### **VI. Miscellaneous Requirements**

None

**SECTION II**

**APPLICABLE WASTEWATER  
REQUIREMENTS**

**PSEG Waterford Energy LLC****Facility ID: 0684000213****PTI Application: 06-06206****Issued: March 29, 2001**

This permit shall expire if construction has not been initiated by the applicant within eighteen months of the effective date of this permit. By accepting this permit, the applicant acknowledges that this eighteen month period shall not be considered or construed as extending or having any effect whatsoever on any compliance schedule or deadline set forth in any administrative or court order issued to or binding upon the permit applicant, and the applicant shall abide by such compliance schedules or deadlines to avoid the initiation of additional legal action by the Ohio EPA.

The director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, examining records, or reports pertaining to the construction, modification, or installation of the above described source of environmental pollutants.

Issuance of this permit does not relieve you of the duty of complying with all applicable federal, state, and local laws, ordinances, and regulations.

Any well, well point, pit, or other device installed for the purpose of lowering the ground water level to facilitate construction of this project shall be properly abandoned in accordance with the provisions of this plan or as directed by the director or his representative.

Any person installing any well, well point, pit or other device used for the purpose of removing ground water from an aquifer shall complete and file a Well Log and Drilling Report form with the Ohio Department of Natural Resources, Division of Water, within 30 days of the well completion in accordance with the Ohio Revised code Section 1521.01 and 1521.05. In addition, any such facility that has a capacity to withdraw waters of the state in an amount greater than 100,000 gallons per day from all sources shall be registered by the owner with the chief of the Division of Water, Ohio Department of Natural Resources, within three months after the facility is completed in accordance with Section 1521.16 of the Ohio Revised Code. For copies of the necessary well log, drilling report, or registration forms, please contact:

Ohio Department of Natural Resources  
Fountain Square  
Columbus, OH 43224-1387  
(614) 265-6717

The proposed wastewater disposal system shall be constructed in strict accordance with the plans and application approved by the director of the Ohio Environmental Protection Agency. There shall be no deviation from these plans without the prior express, written approval of the agency. Any deviations from these plans or the above conditions may lead to such sanctions and penalties as provided for under Ohio law. Approval of this plan and issuance of this permit does not constitute an assurance by the Ohio Environmental Protection Agency 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 are inadequate or cannot meet applicable standards.

This permit to install applies only to the wastewater treatment works listed above. The installation of drinking water supplies, air contaminant sources, or solid waste disposal facilities will require the submittal of a separate application to the director.

**PSEG Waterford Energy LLC**

**Facility ID: 0684000213**

**PTI Application: 06-06206**

**Issued: March 29, 2001**

This permit applies to a wastewater disposal system designed to serve an average daily hydraulic flow of no more than 1,450,000 gallons.

No liquids, sludges, or toxic or hazardous substances other than those set forth in the approved permit shall be accepted for disposal without the prior written approval of the Ohio Environmental Protection Agency.

The applicant shall notify the Ohio Environmental Protection Agency if he does not continue as the sole user of the sewage disposal system..

The Southeast District Office of the Ohio Environmental Protection Agency shall be notified in writing as to (a) the construction starting date; (b) the construction completion date; and (c) the date the wastewater disposal system was placed into operation.

The owner, PSEG Waterford Energy, LLC, shall be responsible for proper operation and maintenance of the wastewater disposal system.



**NEW SOURCE REVIEW FORM B**

PTI Number: 06-06206

Facility ID: 0684000213

FACILITY NAME PSEG Waterford Energy LLC

FACILITY DESCRIPTION Simple (Phase I) and Combined (Phase II) Cycle Combustion Turbine System CITY/TWP Beverly

SIC CODE 4911 SCC CODE 2-02-002-01 EMISSIONS UNIT ID P001

EMISSIONS UNIT DESCRIPTION GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine

DATE INSTALLED To Be Determined

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	Attainment	Phase I - 18 lb/hr Phase II - 21.0 lb/hr (25.0 lb/hr)	Phase I - 15.3 Phase II - 100.0	Phase I - 18 lb/hr Phase II - 21.0 lb/hr (25.0 lb/hr)	Phase I - 15.3 Phase II - 100.0
PM <sub>10</sub>					
Sulfur Dioxide	Attainment	Phase I - 12.0 lb/hr Phase II - 12.0 lb/hr (14.0 lb/hr)	Phase I - 10.2 Phase II - 56.6	Phase I - 12.0 lb/hr Phase II - 12.0 lb/hr (14.0 lb/hr)	Phase I - 10.2 Phase II - 56.6
Organic Compounds	Attainment	Phase I - 3.2 lb/hr Phase II - 3.2 lb/hr (6.8 lb/hr)	Phase I - 2.7 Phase II - 31.8*	Phase I - 3.2 lb/hr Phase II - 3.2 lb/hr (6.8 lb/hr)	Phase I - 2.7 Phase II - 31.8*
Nitrogen Oxides	Attainment	Phase I - 9.0 ppmvd at 15% O <sub>2</sub> - 64.0 lb/hr Phase II - 3.5 ppmvd at 15% O <sub>2</sub> - 25.0 lb/hr (30.0 lb/hr)	Phase I - 54.4 Phase II - 146.9*	Phase I - 9.0 ppmvd at 15% O <sub>2</sub> - 64.0 lb/hr Phase II - 3.5 ppmvd at 15% O <sub>2</sub> - 25.0 lb/hr (30.0 lb/hr)	Phase I - 54.4 Phase II - 146.9*
Carbon Monoxide	Attainment	Phase I - 9.0 ppmvd - 33.0 lb/hr Phase II - 9.0 (15.0) ppmvd - 33.0 lb/hr (69.0 lb/hr)	Phase I - 28.1 Phase II - 366.6*	Phase I - 9.0 ppmvd - 33.0 lb/hr Phase II - 9.0 (15.0) ppmvd - 33.0 lb/hr (69.0 lb/hr)	Phase I - 28.1 Phase II - 366.6*
Lead					
Other: Air Toxics	Ammonia (NH <sub>3</sub> ) Formaldehyde  Sulfuric Acid	PhII-26.0(30.6)lb/hr PhI - 0.19 lb/hr PhII-0.19(0.21)lb/hr PhI - 0.48 lb/hr PhII-0.48(0.56)lb/hr	123.1 0.16 0.87 0.41 2.3	PhII-26.0(30.6)lb/hr PhI - 0.19 lb/hr PhII-0.19(0.21)lb/hr PhI - 0.48 lb/hr PhII-0.48(0.56)lb/hr	123.1 0.16 0.87 0.41 2.3

( ) Emission rates with duct burner firing - 4000 hrs/yr \* includes annual startup and shutdown emissions

**NEW SOURCE REVIEW FORM B**

PTI Number: 06-06206

Facility ID: 0684000213

FACILITY NAME PSEG Waterford Energy LLC

FACILITY DESCRIPTION Simple (Phase I) and Combined (Phase II) Cycle Combustion Turbine System CITY/TWP Beverly

APPLICABLE FEDERAL RULES:

NSPS? Subparts GG, Da

NESHAP? Exempt from

PSD? Y

OFFSET POLICY?

MACT < 10 tpy formaldehyde

**WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?**

**Enter Determination** Phase I - Dry Low NOx Burners ; Phase II - Dry Low NOx Burners Controlled with Selective Catalytic Reduction; BACT (see staff determination)

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? YES

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? Phase II - \$3,500,000

**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED\*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: Ammonia (NH3), Formaldehyde, Sulfuric Acid

**NEW SOURCE REVIEW FORM B**

PTI Number: 06-06206 Facility ID: 0684000213

FACILITY NAME PSEG Waterford Energy LLC

FACILITY DESCRIPTION Simple (Phase I) and Combined (Phase II) CITY/TWP Beverly  
 Cycle Combustion Turbine System.

SIC CODE 4911 SCC CODE 2-02-002-01 EMISSIONS UNIT ID P002

EMISSIONS UNIT DESCRIPTION GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine

DATE INSTALLED To Be Determined

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	Attainment	Phase I - 18 lb/hr Phase II - 21.0 lb/hr (25.0 lb/hr)	Phase I - 15.3 Phase II - 100.0	Phase I - 18 lb/hr Phase II - 21.0 lb/hr (25.0 lb/hr)	Phase I - 15.3 Phase II - 100.0
PM <sub>10</sub>					
Sulfur Dioxide	Attainment	Phase I - 12.0 lb/hr Phase II - 12.0 lb/hr (14.0 lb/hr)	Phase I - 10.2 Phase II - 56.6	Phase I - 12.0 lb/hr Phase II - 12.0 lb/hr (14.0 lb/hr)	Phase I - 10.2 Phase II - 56.6
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Lead					

**NEW SOURCE REVIEW FORM B**

PTI Number: 06-06206

Facility ID: 0684000213

FACILITY NAME PSEG Waterford Energy LLC

FACILITY DESCRIPTION Simple (Phase I) and Combined (Phase II) Cycle Combustion Turbine System. CITY/TWP Beverly

Other: Air Toxics	Ammonia (NH3)	PhII-26.0(30.6)lb/h	123.1	PhII-26.0(30.6)lb/h	123.1
	Formaldehyde	r	0.16	r	0.16
		PhI - 0.19 lb/hr	0.87	PhI - 0.19 lb/hr	0.87
	Sulfuric Acid	PhII-0.19(0.21)lb/h	0.41	PhII-0.19(0.21)lb/h	0.41
		r	2.3	r	2.3
		PhI - 0.48 lb/hr		PhI - 0.48 lb/hr	
		PhII-0.48(0.56)lb/h		PhII-0.48(0.56)lb/h	
		r		r	

( ) Emission rates with duct burner firing - 4000 hrs/yr \* includes annual startup and shutdown emissions

APPLICABLE FEDERAL RULES:

NSPS? Subparts GG, Da NESHAP? Exempt from PSD? Y OFFSET POLICY? MACT < 10 tpy formaldehyde

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination Phase I - Dry Low NOx Burners ; Phase II - Dry Low NOx Burners Controlled with Selective Catalytic Reduction; BACT (see staff determination)

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? YES

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? Phase II - \$3,500,000

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED\*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: Ammonia (NH3), Formaldehyde, Sulfuric Acid

**NEW SOURCE REVIEW FORM B**

PTI Number: 06-06206 Facility ID: 0684000213

FACILITY NAME PSEG Waterford Energy LLC

FACILITY DESCRIPTION Simple (Phase I) and Combined (Phase II) CITY/TWP Beverly  
 Cycle Combustion Turbine System

SIC CODE 4911 SCC CODE 2-02-002-01 EMISSIONS UNIT ID P003

EMISSIONS UNIT DESCRIPTION GE 7FA Natural Gas Fired Dry Low NOx (DLN) Combustion Turbine

DATE INSTALLED To Be Determined

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	Attainment	Phase I - 18 lb/hr Phase II - 21.0 lb/hr (25.0 lb/hr)	Phase I - 15.3 Phase II - 100.0	Phase I - 18 lb/hr Phase II - 21.0 lb/hr (25.0 lb/hr)	Phase I - 15.3 Phase II - 100.0
PM <sub>10</sub>					
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Lead					

**1 NEW SOURCE REVIEW FORM B**

PTI Number: 06-06206

Facility ID: 0684000213

FACILITY NAME PSEG Waterford Energy LLC

FACILITY DESCRIPTION Simple (Phase I) and Combined (Phase II) Cycle Combustion Turbine System CITY/TWP Beverly

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	Formaldehyde	r	0.16	r	0.16
		PhI - 0.19 lb/hr	0.87	PhI - 0.19 lb/hr	0.87
	Sulfuric Acid	PhII-0.19(0.21)lb/h	0.41	PhII-0.19(0.21)lb/h	0.41
		r	2.3	r	2.3
		PhI - 0.48 lb/hr		PhI - 0.48 lb/hr	
		PhII-0.48(0.56)lb/h		PhII-0.48(0.56)lb/h	
		r		r	

() Emission rates with duct burner firing - 4000 hrs/yr \* includes annual startup and shutdown emissions

## APPLICABLE FEDERAL RULES:

NSPS? Subparts GG, Da

NESHAP? Exempt from

PSD? Y

OFFSET POLICY?

MACT &lt; 10 tpy formaldehyde

## WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination Phase I - Dry Low NOx Burners ; Phase II - Dry Low NOx Burners Controlled with Selective Catalytic Reduction; BACT (see staff determination)

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY?

YES

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

Phase II - \$3,500,000

**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED\*?

X

YES

NO

IDENTIFY THE AIR CONTAMINANTS:

Ammonia (NH3), Formaldehyde, Sulfuric Acid

**12 NEW SOURCE REVIEW FORM B**

PTI Number: 06-06206 Facility ID: 0684000213

FACILITY NAME PSEG Waterford Energy LLC

FACILITY DESCRIPTION Simple (Phase I) and Combined (Phase II) CITY/TWP Beverly  
Cycle Combustion Turbine System

Ohio EPA Permit to Install Information Form Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit **hard copy items to Pam McGraner, AQM&P, DAPC, Central Office, and electronic files to airpti@epa.state.oh.us**

*Please fill out the following. If the checkbox does not work, replace it with an 'X'*

<u>Please fill out the following. If the checkbox does not work, replace it with an 'X'</u>	<u>Electronic</u>	<u>Additional information File Name Convention (your PTI # plus this letter)</u>	<u>Hard Copy</u>	<u>None</u>
<u>Calculations (required)</u>	<input checked="" type="checkbox"/>	0606206c.wpd	<input checked="" type="checkbox"/>	
<u>Modeling form/results</u>	<input type="checkbox"/>	0000000s.wpd	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>PTI Application (complete or partial)*</u>	<input type="checkbox"/>	0000000a.wpd	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>BAT Study</u>	<input type="checkbox"/>	0000000b.wpd	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>Other/misc.</u>	<input type="checkbox"/>	0000000t.wpd	<input type="checkbox"/>	<input type="checkbox"/>

\* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

NSR Discussion

NONE

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

Synthetic Minor Determination and/or  Netting Determination  
Permit To Install ENTER PTI NUMBER HERE

- A. Source Description
- B. Facility Emissions and Attainment Status
- C. Source Emissions
- D. Conclusion

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:  
SEE ATTACHED STAFF DETERMINATION

**NEW SOURCE REVIEW FORM B**

PTI Number: 06-06206

Facility ID: 0684000213

FACILITY NAME PSEG Waterford Energy LLC

FACILITY DESCRIPTION Simple (Phase I) and Combined (Phase II) CITY/TWP Beverly  
Cycle Combustion Turbine System

Please complete:

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

<u>Pollutant</u>	<u>Tons Per Year</u>
NOx	163.2 (Phase I) 443.0 (Phase II)
SO2	30.6 (Phase I) 169.7 (Phase II)
CO	84.2 (Phase I) 1104.6 (Phase II)
VOC	8.2 (Phase I) 95.7 (Phase II)
PM	45.9 (Phase I) 300.3 (Phase II)
Ammonia (NH3)	369.2 (Phase II)
Formaldehyde	0.5 (Phase I) 2.6 (Phase II)
Sulfuric Acid	1.2 (Phase I) 6.8 (Phase II)