



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL  
WOOD COUNTY  
Application No: 03-13362**

**CERTIFIED MAIL**

Street /

) 644-3020 FAX: (614) 644-2329

Mailing Address:  
Lazarus Gov.  
Center

**DATE:** 10/05/2000

Troy Energy, LLC  
Bob McKinley  
120 Tredegar St.  
Richmond, VA 23219

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 Directors 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

NWDO

Alan Lloyd, DAPC-AQM&P



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install

Issue Date: 10/05/2000

**FINAL PERMIT TO INSTALL 03-13362**

Application Number: 03-13362  
APS Premise Number: 0387000377  
Permit Fee: **\$2300.00**  
Name of Facility: Troy Energy, LLC  
Person to Contact: Bob McKinley  
Address: 120 Tredegar St.  
Richmond, VA 23219

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

**Not Available yet  
Luckey, Ohio**

Description of proposed emissions unit(s):

**Four 1,570 mmBTU/hr combustion turbines.**

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Issued: 10/05/2000

**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.
  - iii. Written reports, which identify any deviations from the federally enforceable

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

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

## **2. Scheduled Maintenance/Malfunction Reporting**

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

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

## **3. Risk Management Plans**

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

## **4. Title IV Provisions**

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

## **5. Severability Clause**

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

## 6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

## 7. Fees

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

## 8. Federal and State Enforceability

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

## 9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the

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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

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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.

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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. Best Available Technology**

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology

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(BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

#### 10. Construction Compliance Certification

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.

#### 11. 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.

<b>SUMMARY (for informational purposes only)</b>	
<b>TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS</b>	
<u>Pollutant</u>	<u>Tons Per Year</u>
NOx	241.0
CO	133.0
VOC	12.7
PE	74.8
SO2	52.8
Sulfuric Acid	5.6
Formaldehyde	7.0

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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

1. The permit to install for these emissions units ( P001, P002, and P003) were evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the 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. The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the MAGLC. The following summarizes the results of the modeling for the "worst case" pollutants:

Pollutant: Formaldehyde

TLV (ug/m3): 272.69

Maximum Hourly Emission Rate (lbs/hr): 3.4\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.076

MAGLC (ug/m3): 6.49

Pollutant: Sulfuric Acid

TLV (ug/m3): 1000

Maximum Hourly Emission Rate (lbs/hr): 44.0\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.983

MAGLC (ug/m3): 23.8

\* This was modeled for emissions units P001, P002, P003, & P004 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 still 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 previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in

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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.

**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>	<u>Applicable Rules/Requirements</u>
P001- GE 7FA simple combustion turbine, 167 MW (nominal)	OAC Rule 3745-31-05 (A)(3)

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Emissions Unit ID: P001

	<u>Applicable Emissions Limitations/Control Measures</u>	emissions shall not exceed:
OAC Rule 3745-31-05 (D)	control requirements, see A.I.2.a.  when firing natural gas, emissions shall not exceed:  9 ppmvd nitrogen oxides (NO <sub>x</sub> ) at 15% Oxygen 0.037 lb NO <sub>x</sub> /MM Btu heat input	42 ppmvd NO <sub>x</sub> at 15% Oxygen 0.1765 lb NO <sub>x</sub> /MM Btu heat input 351.0 lbs NO <sub>x</sub> /hr & 180.8 tons NO <sub>x</sub> /yr  0.052 lb SO <sub>2</sub> /MM Btu heat input 103.0 SO <sub>2</sub> /hr & 52.8 tons SO <sub>2</sub> /year  0.036 lb CO/MM Btu heat input
OAC Rule 3745-17-07	65.0 lbs NO <sub>x</sub> /hr & 241.0 tons NO <sub>x</sub> /yr  0.0015 lb sulfur dioxide (SO <sub>2</sub> )/MM Btu heat input	72.0 lbs CO/hr & 36.9 tons CO/yr  0.0040 lb VOC/MM Btu heat input 8.0 lbs VOC/hr & 4.1 tons VOC/year,
OAC Rule 3745-17-11 (B)(4)	2.4 lbs SO <sub>2</sub> /hr & 10.0 tons SO <sub>2</sub> /year	0.020 lb PE/MM Btu heat input 39.0 lbs PE/hr & 20.0 tons PE/yr
OAC rule 3745-18-06(F)	0.018 lb carbon monoxide (CO)/MM Btu heat input 32.0 lbs CO/hr & 133.0 tons CO/yr	0.48 lb formaldehyde/hr & 0.3 tons formaldehyde/yr
40 CFR Part 60, Subpart GG	0.0017 lb volatile organic compounds (VOC)/MM Btu heat input	11.0 lbs sulfuric acid/hr & 5.6 tons sulfuric acid/yr
40 CFR Part 75	3.0 lbs VOC/hr & 12.5 tons VOC/year,	operational restrictions, see A.II.1.
OAC Rule 3745-103	0.010 lb particulate emissions (PE)/MM Btu heat input 18.0 lbs PE/hr & 74.8 tons PE/yr  1.7 lbs formaldehyde/hr & 7.0 tons formaldehyde/yr	group emissions limits from P001, P002 P003 and P004 combined of: 52.8 tons SO <sub>2</sub> , 133.0 tons CO, 241.0 tons NO <sub>x</sub> , 74.8 tons PE, 7.0 tons of any individual HAP, 25 tons of combined HAPs (see A.I.2.e.), per rolling 12-month period
	1.1 lbs sulfuric acid/hr & 4.6 tons/sulfuric acid/yr	visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule
	visible particulate emissions shall not exceed 10 percent opacity as a six-minute average	See A.I.2.b.
	when firing #2 Oil/Distillate Oil,	See A.I.2.b.

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See A.I.2.c.

See A.I.2.d.

See A.I.2.d.

Emissions Unit ID: P001

**2. Additional Terms and Conditions**

- 2.a** The permittee shall install and maintain dry low NOx burners and a water injection system on this emissions unit.
- 2.b** The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.c** The emissions limits based on this applicable rule are 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.d** If the permittee is subject to the requirements of 40 CFR Part 75 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.
- 2.e** The emissions of Hazardous Air Pollutants (HAPs), as defined in Section 112(b) of the Clean Air Act, from emissions units P001, P002, P003 and P004 combined, shall not exceed 7.0 tons per year for an individual HAP and 25 tons per year for any combination of HAPs, per rolling 12 month period.

**II. Operational Restrictions**

- 1. The maximum annual fuel usage for emissions units P001, P002, P003 and P004 combined, shall not exceed any of the following:
  - a. 14,020 million cubic feet of natural gas per rolling 12-month period;
  - b. 15.77 million gallons of #2 oil/distillate oil usage per rolling 12-month period;
  - c. a cumulative 14,020 million cubic feet fuel (natural gas and #2 oil/distillate oil usage) per rolling 12-month period where:

Emissions Unit ID: P001

1 million cubic feet of natural gas = 1 million cubic feet of fuel and;  
 1 million gallons of #2 oil fuel oil = 889 million cubic feet of fuel

To ensure enforceability during the first 12 calendar months following startup\*, the permittee shall not exceed the fuel usage restrictions specified in the following table:

Month	Cumulative Summation of fuel usage (million cubic feet)
1	3,500
1-2	7,000
1-3	10,500
1-4	13,000
1-12	14,020

After the first 12 calendar months following the startup, compliance with the annual usage restrictions shall be based on a rolling, 12-month summation.

\*Startup for the facility shall be defined as the date when emissions units P001, P002, P003, or P004 is set in operation for any purpose. Start-up for the daily operation of the turbine is defined in condition A.II.2. and A.II.3. below.

- As specified in the permittee's PTI application, the maximum design electric output of this unit is 191.2 MW\*, measured at the generator terminal, when firing natural gas. This value corresponds to a maximum natural gas flow of 1.88 million cf/hr with a lower heat value of 931 Btu/cf (1749.5 MM Btu/hr), at -10 degrees F. As specified in the permittee's PTI application, the maximum design electric output of this unit is 196.9 MW\*, measured at the generator terminal, when using #2 oil/distillate oil. This value corresponds to a maximum fuel flow of 15,306 gallons/hr with a lower heat value of 129,930 Btu/gallon (1988.7 MM Btu/hr), at -10 degrees F. The permittee shall operate this emissions unit within the design electric output of the system as specified above, except for start-up and shutdown. Start-up shall be defined as the time necessary to bring the unit to its minimum operating temperature (as recommended by the vendor), but under no circumstances shall it exceed 60 minutes in duration. Shutdown periods shall not exceed 60 minutes in duration.

\* The short term emission limits in this permit are based on these maximum heat input rates, and represent the worst case emissions. Variables in determining short term emissions include siting requirements for the facility, quality of fuel, fuel flow rate with respect to ambient temperature, and operational demands from the customer. The Ohio EPA is aware that extreme temperature conditions impact the capacity of the unit and the agency may adjust the potential to emit of the emissions units accordingly.

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3. With the exception of startup and shutdown, emissions unit P001 shall be operated at minimum of 50% load. The permittee may petition the Ohio EPA, Northwest District Office (NWDO) to operate at a greater load range if it can demonstrate to the agency's satisfaction that the emissions unit will comply with all applicable emission limits in this permit, and modeling requirements pursuant to Engineering Guide no. 69.
  
4. The permittee shall burn only natural gas and #2 oil/distillate oil in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 0.5 grains/scf. The maximum sulfur content of the #2 oil/distillate oil shall not exceed 0.05 percent by weight.

### **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain monthly records of the following information for emissions units P001, P002, P003, and P004 combined:
  - a. the quantity natural gas fired, in million cubic feet ;
  - b. the quantity of #2 oil/distillate oil fired, in gallons;
  - c. the monthly emission rate\* for PE, NO<sub>x</sub>, SO<sub>2</sub>, CO, any individual and combined HAP, in tons; and
  - d. during the first 12 calendar months of operation following startup, the quantity of natural gas fired, #2 oil/distillate oil fired, and the cumulative fuel usage (as defined in A.II.1.c.);
  - e. beginning the first 12 calendar months of operation following startup, the rolling, 12-month summation of the quantity of natural gas fired, #2 oil/distillate oil fired, and the cumulative fuel usage (as defined in A.II.1.c.);
  - f. during the first 12 calendar months of operation following startup, the cumulative emission rate for PE, NO<sub>x</sub>, SO<sub>2</sub>, CO, any individual and combined HAP; and
  - g. beginning the first 12 calendar months of operation following startup, the rolling, 12-month summation of the emission rate for PE, NO<sub>x</sub>, SO<sub>2</sub>, CO, any individual and combined HAP.

\* The permittee shall use the most recent testing/emissions data available for each respective pollutant, in conjunction with the quantity of fuel fired, as recorded above, to

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determine monthly emissions. The monthly emissions calculated above may include an adjustment for the average ambient temperature for that month the unit is operating.

2. For each day during which the permittee burns a fuel other than natural gas or #2 oil/distillate oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
3. The information management system for this emissions unit shall be capable of monitoring and recording electric output (in MW), fuel flow (gallons and million cu ft), and hours of operation.
4. The permittee shall maintain documentation on the sulfur contents and heating values of the fuels received as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels. The permittee shall determine the heat value of the fuels using ASTM method D240. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Ohio EPA, NWDO. The newest or most recent revisions to the applicable test method shall be used for these analyses. Alternative, equivalent methods may be used if they comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75, or upon written approval by the Ohio EPA, NWDO. The frequency of the sampling shall be such that it complies with the requirements specified in 40 CFR Part 60.334 and/or 40 CFR Part 75 or as approved by the Ohio EPA.
5. Except for periods described in 40 CFR part 60.13, the permittee shall install, operate, and maintain 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 specified in 40 CFR Part 60.13 and/or 40 CFR Part 75 or as approved by the Ohio EPA.

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 (with an hourly averaging period), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

\* The installation and operation of systems to continuously monitor and record emissions of NO<sub>x</sub> may be performed in lieu of continuously monitoring the fuel consumption, water ratio, and nitrogen content of the fuel being fired in the turbine, as required by 40 CFR 60.334.

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or #2 oil/distillate oil was burned in this emissions unit. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(1).
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the

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- rolling, 12-month fuel usage limitations and, for the first 12 calendar months of operation, all exceedances of the maximum allowable fuel usage. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(1).
3. The permittee shall submit quarterly reports which identify each period during which an exemption for ice-fog provided in 40 CFR 60.332(f) is in effect. The report shall include the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time when the air pollution control system was reactivated.
  4. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 0.5 grains/scf, or the sulfur content of the #2 Oil/Distillate Oil exceed the 0.05% by weight limit established in this permit. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).
  5. 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 Ohio EPA NWDO documenting the date, commencement and completion times, duration, magnitude, reason (i.e., startup and shutdown periods as defined in Condition A.II.3. above, malfunctions, extreme temperature conditions, etc.), and corrective actions taken (if any), of all instances of NO<sub>x</sub> values in excess of the applicable limits specified in the terms and conditions of this permit. These reports shall also contain the total NO<sub>x</sub> emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, NWDO documenting any continuous NO<sub>x</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 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.

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6. 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 Ohio EPA, NWDO within 30 days following the end of each calendar quarter in a manner prescribed by the Director.
7. The permittee shall submit deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the requirements of condition A.II.3. above. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).
8. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess and emissions reports for emissions unit P001 in accordance with this permit.
9. This emissions unit is subject to the applicable provisions of Subpart 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  
Northwest District Office  
Division of Air Pollution Control  
347 North Dunbridge Road

Bowling Green, Ohio 43402

## V. Testing Requirements/Compliance Methods Determinations

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> outlet concentrations, the lbs/MM Btu limitations for NO<sub>x</sub> \*, CO, VOC, SO<sub>2</sub>, and PE, and the mass emissions limitations for NO<sub>x</sub>, CO, VOC, and PE, while firing both natural gas and #2 oil/distillate oil. Emission testing shall be conducted to demonstrate compliance with the mass emissions limitation for Formaldehyde while firing natural gas.
  - 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 PE, Method 5 of 40 CFR Part 60, Appendix A; for Formaldehyde, SW-846 Method 0011; for VOC Method 25 of 40 CFR Part 60, Appendix A; SO<sub>2</sub> Method 6 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, NWDO.
  - d. The testing shall be performed at peak load (as defined by 40 CFR Part 60, Subpart GG), unless otherwise specified or approved by the Ohio EPA, NWDO.
  - e. Not later than 45 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, NWDO. 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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA, NWDO refusal to accept the results of the emission tests.
  - f. Personnel from the Ohio EPA, NWDO shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
  - g. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, NWDO within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio

EPA, NWDO.

\* In lieu of the test methods and procedures required under 40 CFR Part 60.335, the permittee shall follow the testing requirements in accordance with this permit.

2. Within 60 days after achieving the maximum production rate at which the 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 NO<sub>x</sub> monitoring system pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and/or 40 CFR Part 75. Personnel from the Ohio EPA, NWDO 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 within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, NWDO 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 ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and/or 40 CFR Part 75.
3. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:
  - a. Emission Limitation  
when firing natural gas:  
65.0 lbs NO<sub>x</sub>/hr 241.0 tons NO<sub>x</sub>/yr  
0.037 lb NO<sub>x</sub>/MM Btu heat input  
9 ppmvd at 15% Oxygen  
  
when firing #2 oil:  
351.0 lbs NO<sub>x</sub>/hr 180.8 tons NO<sub>x</sub>/yr  
0.1765 lb NO<sub>x</sub>/MM Btu heat input  
42 ppmvd at 15% Oxygen  
  
Applicable Compliance Method  
Compliance with the allowable outlet concentration and the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1 and continuous emissions monitoring requirement as described in conditions A.III. 5. and A.V.2. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.
  - b. Emission Limitation

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when firing natural gas:  
18.0 lbs PE/hr 74.8 tons PE/yr  
0.010 lb PE/MM Btu heat input

when firing #2 oil:  
39.0 lbs PE/hr 20.0 tons PE/yr  
0.02 lb PE/MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

c. Emission Limitation

when firing natural gas:  
2.4 lbs SO<sub>2</sub>/hr 10.0 tons SO<sub>2</sub>/yr  
0.0015 lb SO<sub>2</sub>/MM Btu heat input

when firing #2 oil:  
103.0 lbs SO<sub>2</sub>/hr 52.8 tons SO<sub>2</sub>/yr  
0.052 lb SO<sub>2</sub>/MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

d. Emission Limitation

when firing natural gas:  
3.0 lbs VOC/hr, 12.5 tons VOC/yr  
0.0017 lb VOC /MM Btu heat input

when firing #2 oil:  
8.0 lbs VOC/hr, 4.1 tons VOC/yr  
0.004 lb VOC/MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM

Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

- e. Emission Limitation  
when firing natural gas:  
32.0 lbs CO/hr & 133.0 tons CO/yr  
0.018 lb CO /MM Btu heat input

when firing #2 oil:  
72.0 lbs CO/hr & 36.9 tons CO/yr  
0.036 lb CO /MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

- f. Emission Limitation  
when firing natural gas:  
1.7 lb formaldehyde/hr, 7.0 tons formaldehyde/yr

while firing #2 oil:  
0.48 lb formaldehyde/hr, 0.3 ton formaldehyde/yr

Applicable Compliance Method

Compliance with the lbs/hr emission limitation when firing natural gas shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the lbs/hr emission limitation when firing #2 oil shall be demonstrated by the multiplying the AP 42 emission factor table 3.1-4 (4/00) by the maximum fuel usage defined in condition A.II.2. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitations shall be determined by multiplying the above hourly emission limit by the annual hours of operation.

- g. Emission Limitation  
when firing natural gas:  
1.1 lb sulfuric acid/hr 4.6 ton sulfuric acid/yr

while firing #2 oil:

Emissions Unit ID: P001

11.0 lbs sulfuric acid/hr 5.6 tons sulfuric acid/yr

Applicable Compliance Method

The lb/hr emission rate for sulfuric acid mist is based on the manufacturers performance specification for this pollutant while firing #2 oil and natural gas. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitations shall be determined by multiplying the above hourly emission limit by the annual hours of operation.

h. Emission Limitation

Visible particulate emissions when burning natural gas shall not exceed 10 percent opacity as a six-minute average.

Visible particulate emissions shall not exceed 20 percent opacity as a six-minute average.

Applicable Compliance Method

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

i. Emission Limitation

52.8 tons of SO<sub>2</sub> per rolling 12-month period  
 133.0 tons of CO per rolling 12-month period  
 241.0 tons of NO<sub>x</sub> per rolling 12-month period  
 74.8 tons PE per rolling 12-month period  
 7.0 tons of any individual HAP per rolling 12-month period  
 25 tons of combined HAPs per rolling 12-month period

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III.1.

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1. Should this emissions unit be converted from a simple cycle to a combined cycle turbine in the future, a new BAT determination would be required.
2. 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 30 days of the start-up of this emissions unit, 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 40 CFR Part 60, Appendix F and/or 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.

3. In accordance with OAC rule 3745-31-05(D), sections A.II.1 through A.VI.2. of the terms and conditions constitute the federally enforceable portions of this permit to install.

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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>
P001 - GE 7FA simple combustion turbine, 167 MW (nominal)	N/A	

**2. Additional Terms and Conditions**

None.

**II. Operational Restrictions**

None

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

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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PTI A

Emissions Unit ID: P002

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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>	<u>Applicable Rules/Requirements</u>
P002 - GE 7FA simple combustion turbine, 167 MW (nominal)	OAC Rule 3745-31-05 (A)(3)

Emissions Unit ID: P002

	Applicable Emissions Limitations/Control Measures	
		0.052 lb SO <sub>2</sub> /MM Btu heat input 103.0 SO <sub>2</sub> /hr & 52.8 tons SO <sub>2</sub> /year
OAC Rule 3745-31-05 (D)	control requirements, see A.I.2.a. when firing natural gas, emissions shall not exceed: 9 ppmvd nitrogen oxides (NO <sub>x</sub> ) at 15% Oxygen 0.037 lb NO <sub>x</sub> /MM Btu heat input 65.0 lbs NO <sub>x</sub> /hr & 241.0 tons NO <sub>x</sub> /yr	0.036 lb CO/MM Btu heat input 72.0 lbs CO/hr & 36.9 tons CO/yr 0.0040 lb VOC/MM Btu heat input 8.0 lbs VOC/hr & 4.1 tons VOC/year, 0.020 lb PE/MM Btu heat input 39.0 lbs PE/hr & 20.0 tons PE/yr
OAC Rule 3745-17-07	0.0015 lb sulfur dioxide (SO <sub>2</sub> )/MM Btu heat input 2.4 lbs SO <sub>2</sub> /hr & 10.0 tons SO <sub>2</sub> /year	0.48 lb formaldehyde/hr & 0.3 tons formaldehyde/yr 11.0 lbs sulfuric acid/hr & 5.6 tons sulfuric acid/yr
OAC Rule 3745-17-11 (B)(4)	0.018 lb carbon monoxide (CO)/MM Btu heat input 32.0 lbs CO/hr & 133.0 tons CO/yr	operational restrictions, see A.II.1.
OAC rule 3745-18-06(F)	0.0017 lb volatile organic compounds (VOC)/MM Btu heat input 3.0 lbs VOC/hr & 12.5 tons VOC/year,	group emissions limits from P001, P002 P003 and P004 combined of: 52.8 tons SO <sub>2</sub> , 133.0 tons CO, 241.0 tons NO <sub>x</sub> , 74.8 tons PE, 7.0 tons of any individual HAP, 25 tons of combined HAPs (see A.I.2.e.), per rolling 12-month period
40 CFR Part 60, Subpart GG	0.010 lb particulate emissions (PE)/MM Btu heat input	
40 CFR Part 75	18.0 lbs PE/hr & 74.8 tons PE/yr	visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule
OAC Rule 3745-103	1.7 lbs formaldehyde/hr & 7.0 tons formaldehyde/yr	See A.I.2.b.
	1.1 lbs sulfuric acid/hr & 4.6 tons/sulfuric acid/yr	See A.I.2.b.
	visible particulate emissions shall not exceed 10 percent opacity as a six-minute average	See A.I.2.c.
	when firing #2 Oil/Distillate Oil, emissions shall not exceed:	See A.I.2.d.
	42 ppmvd NO <sub>x</sub> at 15% Oxygen 0.1765 lb NO <sub>x</sub> /MM Btu heat input 351.0 lbs NO <sub>x</sub> /hr & 180.8 tons NO <sub>x</sub> /yr	See A.I.2.d.

## 2. Additional Terms and Conditions

- 2.a The permittee shall install and maintain dry low NOx burners and a water injection system on this emissions unit.
- 2.b The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.c The emissions limits based on this applicable rule are 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.d If the permittee is subject to the requirements of 40 CFR Part 75 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.
- 2.e The emissions of Hazardous Air Pollutants (HAPs), as defined in Section 112(b) of the Clean Air Act, from emissions units P001, P002, P003 and P004 combined, shall not exceed 7.0 tons per year for an individual HAP and 25 tons per year for any combination of HAPs, per rolling 12 month period.

## II. Operational Restrictions

- 1. The maximum annual fuel usage for emissions units P001, P002, P003 and P004 combined, shall not exceed any of the following:
  - a. 14,020 million cubic feet of natural gas per rolling 12-month period;
  - b. 15.77 million gallons of #2 oil/distillate oil usage per rolling 12-month period;
  - c. a cumulative 14,020 million cubic feet fuel (natural gas and #2 oil/distillate oil usage) per rolling 12-month period where:
    - 1 million cubic feet of natural gas = 1 million cubic feet of fuel and;
    - 1 million gallons of #2 oil fuel oil = 889 million cubic feet of fuel

To ensure enforceability during the first 12 calendar months following startup\*, the permittee shall not exceed the fuel usage restrictions specified in the following table:

Month

	Cumulative Summation of fuel usage (million cubic feet)
1	3,500
1-2	7,000
1-3	10,500
1-4	13,000
1-12	14,020

After the first 12 calendar months following the startup, compliance with the annual usage restrictions shall be based on a rolling, 12-month summation.

\*Startup for the facility shall be defined as the date when emissions units P001, P002, P003, **or** P004 is set in operation for any purpose. Start-up for the daily operation of the turbine is defined in condition A.II.2. and A.II.3. below.

- As specified in the permittee's PTI application, the maximum design electric output of this unit is 191.2 MW\*, measured at the generator terminal, when firing natural gas. This value corresponds to a maximum natural gas flow of 1.88 million cf/hr with a lower heat value of 931 Btu/cf (1749.5 MM Btu/hr), at -10 degrees F. As specified in the permittee's PTI application, the maximum design electric output of this unit is 196.9 MW\*, measured at the generator terminal, when using #2 oil/distillate oil. This value corresponds to a maximum fuel flow of 15,306 gallons/hr with a lower heat value of 129,930 Btu/gallon (1988.7 MM Btu/hr), at -10 degrees F. The permittee shall operate this emissions unit within the design electric output of the system as specified above, except for start-up and shutdown. Start-up shall be defined as the time necessary to bring the unit to its minimum operating temperature (as recommended by the vendor), but under no circumstances shall it exceed 60 minutes in duration. Shutdown periods shall not exceed 60 minutes in duration.

\* The short term emission limits in this permit are based on these maximum heat input rates, and represent the worst case emissions. Variables in determining short term emissions include siting requirements for the facility, quality of fuel, fuel flow rate with respect to ambient temperature, and operational demands from the customer. The Ohio EPA is aware that extreme temperature conditions impact the capacity of the unit and the agency may adjust the potential to emit of the emissions units accordingly.

- With the exception of startup and shutdown, emissions unit P002 shall be operated at minimum of 50% load. The permittee may petition the Ohio EPA, Northwest District Office (NWDO) to operate at a greater load range if it can demonstrate to the agency's satisfaction that the emissions unit will comply with all applicable emission limits in this permit, and modeling requirements

pursuant to Engineering Guide no. 69.

4. The permittee shall burn only natural gas and #2 oil/distillate oil in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 0.5 grain/scf. The maximum sulfur content of the #2 oil/distillate oil shall not exceed 0.05 percent by weight.

### III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information for emissions unit P001, P002, P003, and P004 combined:
  - a. the quantity natural gas fired, in million cubic feet ;
  - b. the quantity of #2 oil/distillate oil fired, in gallons;
  - c. the monthly emission rate\* for PE, NO<sub>x</sub>, SO<sub>2</sub>, CO, any individual and combined HAP, in tons; and
  - d. during the first 12 calendar months of operation following startup, the quantity of natural gas fired, #2 oil/distillate oil fired, and the cumulative fuel usage (as defined in A.II.1.c.);
  - e. beginning the first 12 calendar months of operation following startup, the rolling, 12-month summation of the quantity of natural gas fired, #2 oil/distillate oil fired, and the cumulative fuel usage (as defined in A.II.1.c.);
  - f. during the first 12 calendar months of operation following startup, the cumulative emission rate for PE, NO<sub>x</sub>, SO<sub>2</sub>, CO, any individual and combined HAP; and
  - g. beginning the first 12 calendar months of operation following startup, the rolling, 12-month summation of the emission rate for PE, NO<sub>x</sub>, SO<sub>2</sub>, CO, any individual and combined HAP.

\* The permittee shall use the most recent testing/emissions data available for each respective pollutant, in conjunction with the quantity of fuel fired, as recorded above, to determine monthly emissions. The monthly emissions calculated above may include an adjustment for the average ambient temperature for that month the unit is operating.
2. For each day during which the permittee burns a fuel other than natural gas or #2 oil/distillate oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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3. The information management system for this emissions unit shall be capable of monitoring and recording electric output (in MW), fuel flow (gallons and million cu ft), and hours of operation.
4. The permittee shall maintain documentation on the sulfur contents and heating values of the fuels received: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels. The permittee shall determine the heat value of the fuels using ASTM method D240. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Ohio EPA, NWDO. The newest or most recent revisions to the applicable test method shall be used for these analyses. Alternative, equivalent methods may be used if they comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75, or upon written approval by the Ohio EPA, NWDO. The frequency of the sampling shall be such that it complies with the requirements specified in 40 CFR Part 60.334 and/or 40 CFR Part 75 or as approved by the Ohio EPA.
5. Except for periods described in 40 CFR part 60.13, the permittee shall install, operate, and maintain 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 specified in 40 CFR Part 60.13 and/or 40 CFR Part 75 or as approved by the Ohio EPA.

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 (with an hourly averaging period), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

\* The installation and operation of systems to continuously monitor and record emissions of NO<sub>x</sub> may be performed in lieu of continuously monitoring the fuel consumption, water ratio, and nitrogen content of the fuel being fired in the turbine, as required by 40 CFR 60.334.

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or #2 oil/distillate oil was burned in this emissions unit. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(1).
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month fuel usage limitations and, for the first 12 calendar months of operation, all exceedances of the maximum allowable fuel usage. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(1).
3. The permittee shall submit quarterly reports which identify each period during which an exemption for ice-fog provided in 40 CFR 60.332(f) is in effect. The report shall include the ambient conditions existing during the period, the date and time the air pollution control system was

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deactivated, and the date and time when the air pollution control system was reactivated.

4. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 0.5 grain/scf, or the sulfur content of the #2 Oil/Distillate Oil exceed the 0.05% by weight limit established in this permit. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).
5. 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 Ohio EPA, NWDO documenting the date, commencement and completion times, duration, magnitude, reason (i.e., startup and shutdown periods as defined in Condition A.II.3. above, malfunctions, extreme temperature conditions, etc.), and corrective actions taken (if any), of all instances of NO<sub>x</sub> values in excess of the applicable limits specified in the terms and conditions of this permit. These reports shall also contain the total NO<sub>x</sub> emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, NWDO documenting any continuous NO<sub>x</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 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.

6. 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 Ohio EPA, NWDO within 30 days following the end of each calendar quarter in a manner prescribed by the Director.
7. The permittee shall submit deviation (excursion) reports that identify each time when this emissions

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unit was not in compliance with the requirements of condition A.II.3. above. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).

8. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess and emissions reports for emissions unit P001 in accordance with this permit.
9. This emissions unit is subject to the applicable provisions of Subpart 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  
 Northwest District Office  
 Division of Air Pollution Control  
 347 North Dunbridge Road  
 Bowling Green, Ohio 43402

## **V. Testing Requirements/Compliance Methods Determinations**

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> outlet concentrations, the lbs/MM Btu limitations for NO<sub>x</sub>\*, CO, VOC, SO<sub>2</sub>, and PE, and the mass emissions limitations for NO<sub>x</sub>, CO, VOC, and PE, while firing both natural gas and #2 oil/distillate oil. Emission testing shall be conducted to demonstrate compliance with the mass emissions limitation for Formaldehyde while firing natural gas.
- 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 PE, Method 5 of 40 CFR Part 60, Appendix A; for Formaldehyde, SW-846 Method 0011; for VOC Method 25 of 40 CFR Part 60, Appendix A; SO<sub>2</sub> Method 6 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 performed at peak load (as defined by 40 CFR Part 60, Subpart GG), unless otherwise specified or approved by the Ohio EPA, NWDO.
- e. Not later than 45 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, NWDO. 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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA, NWDO refusal to accept the results of the emission tests.
- f. Personnel from the Ohio EPA, NWDO shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, NWDO within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

\* In lieu of the test methods and procedures required under 40 CFR Part 60.335, the permittee shall follow the testing requirements in accordance with this permit.

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2. 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 NO<sub>x</sub> monitoring system pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and/or 40 CFR Part 75. Personnel from the Ohio EPA, NWDO 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 within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, NWDO 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 ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and/or 40 CFR Part 75.
  
3. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

- a. Emission Limitation  
when firing natural gas:  
65.0 lbs NO<sub>x</sub>/hr 241.0 tons NO<sub>x</sub>/yr  
0.037 lb NO<sub>x</sub>/MM Btu heat input  
9 ppmvd at 15% Oxygen
- when firing #2 oil:  
351.0 lbs NO<sub>x</sub>/hr 180.8 tons NO<sub>x</sub>/yr  
0.1765 lb NO<sub>x</sub>/MM Btu heat input  
42 ppmvd at 15% Oxygen

Applicable Compliance Method

Compliance with the allowable outlet concentration and the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1 and continuous emissions monitoring requirement as described in conditions A.III. 5. and A.V.2. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

- b. Emission Limitation  
when firing natural gas:  
18.0 lbs PE/hr 74.8 tons PE/yr  
0.010 lb PE/MM Btu heat input
- when firing #2 oil:  
39.0 lbs PE/hr 20.0 tons PE/yr  
0.02 lb PE/MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

- c. Emission Limitation  
when firing natural gas:  
2.4 lbs SO<sub>2</sub>/hr 10.0 tons SO<sub>2</sub>/yr  
0.0015 lb SO<sub>2</sub>/MM Btu heat input
- when firing #2 oil:

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103.0 lbs SO<sub>2</sub>/hr 52.8 tons SO<sub>2</sub>/yr  
0.052 lb SO<sub>2</sub>/MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

d. Emission Limitation

when firing natural gas:

3.0 lbs VOC/hr, 12.5 tons VOC/yr

0.0017 lb VOC /MM Btu heat input

when firing #2 oil:

8.0 lbs VOC/hr, 4.1 tons VOC/yr

0.004 lb VOC/MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

e. Emission Limitation

when firing natural gas:

32.0 lbs CO/hr & 133.0 tons CO/yr

0.018 lb CO /MM Btu heat input

when firing #2 oil:

72.0 lbs CO/hr & 36.9 tons CO/yr

0.036 lb CO /MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

f. Emission Limitation

when firing natural gas:

1.7 lb formaldehyde/hr, 7.0 tons formaldehyde/yr

while firing #2 oil:

0.48 lb formaldehyde/hr, 0.3 ton formaldehyde/yr

Applicable Compliance Method

Compliance with the lbs/hr emission limitation when firing natural gas shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the lbs/hr emission limitation when firing #2 oil shall be demonstrated by the multiplying the AP 42 emission factor table 3.1-4 (4/00) by the maximum fuel usage defined in condition A.II.2. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitations shall be determined by multiplying the above hourly emission limit by the annual hours of operation.

g. Emission Limitation

when firing natural gas:

1.1 lb sulfuric acid/hr 4.6 ton sulfuric acid/yr

while firing #2 oil:

11.0 lbs sulfuric acid/hr 5.6 tons sulfuric acid/yr

Applicable Compliance Method

The lb/hr emission rate for sulfuric acid mist is based on the manufacturers performance specification for this pollutant while firing #2 oil and natural gas. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitations shall be determined by multiplying the above hourly emission limit by the annual hours of operation.

h. Emission Limitation

Visible particulate emissions when burning natural gas shall not exceed 10 percent opacity as a six-minute average.

Visible particulate emissions shall not exceed 20 percent opacity as a six-minute average.

Applicable Compliance Method

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

i. Emission Limitation

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52.8 tons of SO<sub>2</sub> per rolling 12-month period  
133.0 tons of CO per rolling 12-month period  
241.0 tons of NO<sub>x</sub> per rolling 12-month period  
74.8 tons PE per rolling 12-month period  
7.0 tons of any individual HAP per rolling 12-month period  
25 tons of combined HAPs per rolling 12-month period

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III.1.

**VI. Miscellaneous Requirements**

1. Should this emissions unit be converted from a simple cycle to a combined cycle turbine in the future, a new BAT determination would be required.
2. 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 30 days of the start-up of this emissions unit, 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 40 CFR Part 60, Appendix F and/or 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.

3. In accordance with OAC rule 3745-31-05(D), sections A.II.1 through A.VI.2. of the terms and conditions constitute the federally enforceable portions of this permit to install.

**Troy I**

**PTI A**

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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>
P002 - GE 7FA simple combustion turbine, 167 MW (nominal)	N/A	

**2. Additional Terms and Conditions**

None.

**II. Operational Restrictions**

None

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

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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PTI A

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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>	<u>Applicable Rules/Requirements</u>
P003 - GE 7FA simple combustion turbine, 167 MW (nominal)	OAC Rule 3745-31-05 (A)(3)

	Applicable Emissions Limitations/Control Measures	
OAC Rule 3745-31-05 (D)	control requirements, see A.I.2.a. when firing natural gas, emissions shall not exceed:	42 ppmvd NO <sub>x</sub> at 15% Oxygen 0.1765 lb NO <sub>x</sub> /MM Btu heat input 351.0 lbs NO <sub>x</sub> /hr & 180.8 tons NO <sub>x</sub> /yr  0.052 lb SO <sub>2</sub> /MM Btu heat input 103.0 SO <sub>2</sub> /hr & 52.8 tons SO <sub>2</sub> /year
OAC Rule 3745-17-07	9 ppmvd nitrogen oxides (NO <sub>x</sub> ) at 15% Oxygen 0.037 lb NO <sub>x</sub> /MM Btu heat input 65.0 lbs NO <sub>x</sub> /hr & 241.0 tons NO <sub>x</sub> /yr  0.0015 lb sulfur dioxide (SO <sub>2</sub> )/MM Btu heat input 2.4 lbs SO <sub>2</sub> /hr & 10.0 tons SO <sub>2</sub> /year	0.036 lb CO/MM Btu heat input 72.0 lbs CO/hr & 36.9 tons CO/yr  0.0040 lb VOC/MM Btu heat input 8.0 lbs VOC/hr & 4.1 tons VOC/year,  0.020 lb PE/MM Btu heat input 39.0 lbs PE/hr & 20.0 tons PE/yr
OAC Rule 3745-17-11 (B)(4)	0.018 lb carbon monoxide (CO)/MM Btu heat input 32.0 lbs CO/hr & 133.0 tons CO/yr	0.48 lb formaldehyde/hr & 0.3 tons formaldehyde/yr  11.0 lbs sulfuric acid/hr & 5.6 tons sulfuric acid/yr
OAC rule 3745-18-06(F)	0.0017 lb volatile organic compounds (VOC)/MM Btu heat input 3.0 lbs VOC/hr & 12.5 tons VOC/year,	operational restrictions, see A.II.1.  group emissions limits from P001, P002 P003 and P004 combined of: 52.8 tons SO <sub>2</sub> , 133.0 tons CO, 241.0 tons NO <sub>x</sub> , 74.8 tons PE, 7.0 tons of any individual HAP, 25 tons of combined HAPs (see A.I.2.e.), per rolling 12-month period
40 CFR Part 60, Subpart GG  40 CFR Part 75	0.010 lb particulate emissions (PE)/MM Btu heat input 18.0 lbs PE/hr & 74.8 tons PE/yr  1.7 lbs formaldehyde/hr & 7.0 tons formaldehyde/yr	
OAC Rule 3745-103	1.1 lbs sulfuric acid/hr & 4.6 tons/sulfuric acid/yr visible particulate emissions shall not exceed 10 percent opacity as a six-minute average  when firing #2 Oil/Distillate Oil, emissions shall not exceed:	visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule  See A.I.2.b.  See A.I.2.b.  See A.I.2.c.

See A.I.2.d.

See A.I.2.d.

**2. Additional Terms and Conditions**

- 2.a** The permittee shall install and maintain dry low NOx burners and a water injection system on this emissions unit.
- 2.b** The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.c** The emissions limits based on this applicable rule are 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.d** If the permittee is subject to the requirements of 40 CFR Part 75 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.
- 2.e** The emissions of Hazardous Air Pollutants (HAPs), as defined in Section 112(b) of the Clean Air Act, from emissions units P001, P002, P003 and P004 combined, shall not exceed 7.0 tons per year for an individual HAP and 25 tons per year for any combination of HAPs, per rolling 12 month period.

**II. Operational Restrictions**

1. The maximum annual fuel usage for emissions units P001, P002, P003 and P004 combined, shall not exceed any of the following:
- a. 14,020 million cubic feet of natural gas per rolling 12-month period;
  - b. 15.77 million gallons of #2 oil/distillate oil usage per rolling 12-month period;
  - c. a cumulative 14,020 million cubic feet fuel (natural gas and #2 oil/distillate oil usage) per rolling 12-month period where:
    - 1 million cubic feet of natural gas = 1 million cubic feet of fuel and;
    - 1 million gallons of #2 oil fuel oil = 889 million cubic feet of fuel

To ensure enforceability during the first 12 calendar months following startup\*, the permittee shall not exceed the fuel usage restrictions specified in the following table:

Month

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	Cumulative Summation of fuel usage (million cubic feet)
1	3,500
1-2	7,000
1-3	10,500
1-4	13,000
1-12	14,020

After the first 12 calendar months following the startup, compliance with the annual usage restrictions shall be based on a rolling, 12-month summation.

\*Startup for the facility shall be defined as the date when emissions units P001, P002, P003, **or** P004 is set in operation for any purpose. Start-up for the daily operation of the turbine is defined in condition A.II.2. and A.II.3. below.

- As specified in the permittee's PTI application, the maximum design electric output of this unit is 191.2 MW\*, measured at the generator terminal, when firing natural gas. This value corresponds to a maximum natural gas flow of 1.88 million cf/hr with a lower heat value of 931 Btu/cf (1749.5 MM Btu/hr), at -10 degrees F. As specified in the permittee's PTI application, the maximum design electric output of this unit is 196.9 MW\*, measured at the generator terminal, when using #2 oil/distillate oil. This value corresponds to a maximum fuel flow of 15,306 gallons/hr with a lower heat value of 129,930 Btu/gallon (1988.7 MM Btu/hr), at -10 degrees F. The permittee shall operate this emissions unit within the design electric output of the system as specified above, except for start-up and shutdown. Start-up shall be defined as the time necessary to bring the unit to its minimum operating temperature (as recommended by the vendor), but under no circumstances shall it exceed 60 minutes in duration. Shutdown periods shall not exceed 60 minutes in duration.

\* The short term emission limits in this permit are based on these maximum heat input rates, and represent the worst case emissions. Variables in determining short term emissions include siting requirements for the facility, quality of fuel, fuel flow rate with respect to ambient temperature, and operational demands from the customer. The Ohio EPA is aware that extreme temperature conditions impact the capacity of the unit and the agency may adjust the potential to emit of the emissions units accordingly.

- With the exception of startup and shutdown, emissions unit P003 shall be operated at minimum of 50% load. The permittee may petition the Ohio EPA, Northwest District Office (NWDO) to operate at a greater

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load range if it can demonstrate to the agency's satisfaction that the emissions unit will comply with all applicable emission limits in this permit, and modeling requirements pursuant to Engineering Guide no. 69.

4. The permittee shall burn only natural gas and #2 oil/distillate oil in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 0.5 grain/scf. The maximum sulfur content of the #2 oil/distillate oil shall not exceed 0.05 percent by weight.

### III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information for emissions unit P001, P002, P003, and P004 combined:
  - a. the quantity natural gas fired, in million cubic feet ;
  - b. the quantity of #2 oil/distillate oil fired, in gallons;
  - c. the monthly emission rate\* for PE, NO<sub>x</sub>, SO<sub>2</sub>, CO, any individual and combined HAP, in tons; and
  - d. during the first 12 calendar months of operation following startup, the quantity of natural gas fired, #2 oil/distillate oil fired, and the cumulative fuel usage (as defined in A.II.1.c.);
  - e. beginning the first 12 calendar months of operation following startup, the rolling, 12-month summation of the quantity of natural gas fired, #2 oil/distillate oil fired, and the cumulative fuel usage (as defined in A.II.1.c.);
  - f. during the first 12 calendar months of operation following startup, the cumulative emission rate for PE, NO<sub>x</sub>, SO<sub>2</sub>, CO, any individual and combined HAP; and
  - g. beginning the first 12 calendar months of operation following startup, the rolling, 12-month summation of the emission rate for PE, NO<sub>x</sub>, SO<sub>2</sub>, CO, any individual and combined HAP.

\* The permittee shall use the most recent testing/emissions data available for each respective pollutant, in conjunction with the quantity of fuel fired, as recorded above, to determine monthly emissions. The monthly emissions calculated above may include an adjustment for the average ambient temperature for that month the unit is operating.
2. For each day during which the permittee burns a fuel other than natural gas or #2 oil/distillate oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
3. The information management system for this emissions unit shall be capable of monitoring and

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recording electric output (in MW), fuel flow (gallons and million cu ft), and hours of operation.

4. The permittee shall maintain documentation on the sulfur contents and heating values of the fuels received determine compliance with the sulfur content standard as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels. The permittee shall determine the heat value of the fuels using ASTM method D240. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Ohio EPA, NWDO. The newest or most recent revisions to the applicable test method shall be used for these analyses. Alternative, equivalent methods may be used if they comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75, or upon written approval by the Ohio EPA, NWDO. The frequency of the sampling shall be such that it complies with the requirements specified in 40 CFR Part 60.334 and/or 40 CFR Part 75 or as approved by the Ohio EPA.
5. Except for periods described in 40 CFR part 60.13, the permittee shall install, operate, and maintain 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 specified in 40 CFR Part 60.13 and/or 40 CFR Part 75 or as approved by the Ohio EPA.

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 (with an hourly averaging period), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

\* The installation and operation of systems to continuously monitor and record emissions of NO<sub>x</sub> may be performed in lieu of continuously monitoring the fuel consumption, water ratio, and nitrogen content of the fuel being fired in the turbine, as required by 40 CFR 60.334.

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

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or #2 oil/distillate oil was burned in this emissions unit. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(1).
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month fuel usage limitations and, for the first 12 calendar months of operation, all exceedances of the maximum allowable fuel usage. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(1).

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3. The permittee shall submit quarterly reports which identify each period during which an exemption for ice-fog provided in 40 CFR 60.332(f) is in effect. The report shall include the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time when the air pollution control system was reactivated.
4. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 0.5 grain/scf, or the sulfur content of the #2 Oil/Distillate Oil exceed the 0.05% by weight limit established in this permit. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).
5. 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 Ohio EPA, NWDO documenting the date, commencement and completion times, duration, magnitude, reason (i.e., startup and shutdown periods as defined in Condition A.II.3. above, malfunctions, extreme temperature conditions, etc.), and corrective actions taken (if any), of all instances of NO<sub>x</sub> values in excess of the applicable limits specified in the terms and conditions of this permit. These reports shall also contain the total NO<sub>x</sub> emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, NWDO documenting any continuous NO<sub>x</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 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.

6. 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 Ohio EPA, NWDO within 30 days following the end of each calendar quarter in a manner prescribed by the Director.
7. The permittee shall submit deviation (excursion) reports that identify each time when this emissions

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unit was not in compliance with the requirements of condition A.II.3. above. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).

8. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess and emissions reports for emissions unit P001 in accordance with this permit.
9. This emissions unit is subject to the applicable provisions of Subpart 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  
 Northwest District Office  
 Division of Air Pollution Control  
 347 North Dunbridge Road  
 Bowling Green, Ohio 43402

## **V. Testing Requirements/Compliance Methods Determinations**

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> outlet concentrations, the lbs/MM Btu limitations for NO<sub>x</sub>\*, CO, VOC, SO<sub>2</sub>, and PE, and the mass emissions limitations for NO<sub>x</sub>, CO, VOC, and PE, while firing both natural gas and #2 oil/distillate oil. Emission testing shall be conducted to demonstrate compliance with the mass emissions limitation for Formaldehyde while firing natural gas.
- 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 PE, Method 5 of 40 CFR Part 60, Appendix A; for Formaldehyde, SW-846 Method 0011; for VOC Method 25 of 40 CFR Part 60, Appendix A; SO<sub>2</sub> Method 6 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 performed at peak load (as defined by 40 CFR Part 60, Subpart GG), unless otherwise specified or approved by the Ohio EPA, NWDO.
- e. Not later than 45 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, NWDO. 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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA, NWDO refusal to accept the results of the emission tests.
- f. Personnel from the Ohio EPA, NWDO shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, NWDO within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

\* In lieu of the test methods and procedures required under 40 CFR Part 60.335, the permittee shall follow the testing requirements in accordance with this permit.

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2. 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 NO<sub>x</sub> monitoring system pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and/or 40 CFR Part 75. Personnel from the Ohio EPA, NWDO 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 within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, NWDO 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 ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and/or 40 CFR Part 75.
  
3. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:
  - a. Emission Limitation  
when firing natural gas:  
65.0 lbs NO<sub>x</sub>/hr 241.0 tons NO<sub>x</sub>/yr  
0.037 lb NO<sub>x</sub>/MM Btu heat input  
9 ppmvd at 15% Oxygen  
  
when firing #2 oil:  
351.0 lbs NO<sub>x</sub>/hr 180.8 tons NO<sub>x</sub>/yr  
0.1765 lb NO<sub>x</sub>/MM Btu heat input  
42 ppmvd at 15% Oxygen  
  
Applicable Compliance Method  
Compliance with the allowable outlet concentration and the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1 and continuous emissions monitoring requirement as described in conditions A.III. 5. and A.V.2. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.
  
  - b. Emission Limitation  
when firing natural gas:  
18.0 lbs PE/hr 74.8 tons PE/yr  
0.010 lb PE/MM Btu heat input  
  
when firing #2 oil:  
39.0 lbs PE/hr 20.0 tons PE/yr  
0.02 lb PE/MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

- c. Emission Limitation  
when firing natural gas:  
2.4 lbs SO<sub>2</sub>/hr 10.0 tons SO<sub>2</sub>/yr  
0.0015 lb SO<sub>2</sub>/MM Btu heat input
- when firing #2 oil:  
103.0 lbs SO<sub>2</sub>/hr 52.8 tons SO<sub>2</sub>/yr  
0.052 lb SO<sub>2</sub>/MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

d. Emission Limitation

when firing natural gas:

3.0 lbs VOC/hr, 12.5 tons VOC/yr

0.0017 lb VOC /MM Btu heat input

when firing #2 oil:

8.0 lbs VOC/hr, 4.1 tons VOC/yr

0.004 lb VOC/MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

e. Emission Limitation

when firing natural gas:

32.0 lbs CO/hr & 133.0 tons CO/yr

0.018 lb CO /MM Btu heat input

when firing #2 oil:

72.0 lbs CO/hr & 36.9 tons CO/yr

0.036 lb CO /MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

f. Emission Limitation

when firing natural gas:

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1.7 lb formaldehyde/hr, 7.0 tons formaldehyde/yr

while firing #2 oil:

0.48 lb formaldehyde/hr, 0.3 ton formaldehyde/yr

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations when firing natural gas shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the lbs/hr & lb/MM Btu heat input emission limitations when firing #2 oil shall be demonstrated by the multiplying the AP 42 emission factor table 3.1-4 (4/00) by the maximum fuel usage defined in condition A.II.2. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitations shall be determined by multiplying the above hourly emission limit by the annual hours of operation.

g. Emission Limitation

when firing natural gas:

1.1 lb sulfuric acid/hr 4.6 ton sulfuric acid/yr

while firing #2 oil:

11.0 lbs sulfuric acid/hr 5.6 tons sulfuric acid/yr

Applicable Compliance Method

The lb/hr emission rate for sulfuric acid mist is based on the manufacturers performance specification for this pollutant while firing #2 oil and natural gas. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitations shall be determined by multiplying the above hourly emission limit by the annual hours of operation.

h. Emission Limitation

Visible particulate emissions when burning natural gas shall not exceed 10 percent opacity as a six-minute average.

Visible particulate emissions shall not exceed 20 percent opacity as a six-minute average.

Applicable Compliance Method

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

i. Emission Limitation

52.8 tons of SO<sub>2</sub> per rolling 12-month period

133.0 tons of CO per rolling 12-month period

241.0 tons of NO<sub>x</sub> per rolling 12-month period

74.8 tons PE per rolling 12-month period

7.0 tons of any individual HAP per rolling 12-month period

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25 tons of combined HAPs per rolling 12-month period

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III.1.

**VI. Miscellaneous Requirements**

1. Should this emissions unit be converted from a simple cycle to a combined cycle turbine in the future, a new BAT determination would be required.
2. 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 30 days of the start-up of this emissions unit, 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 40 CFR Part 60, Appendix F and/or 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.

3. In accordance with OAC rule 3745-31-05(D), sections A.II.1 through A.VI.2. of the terms and conditions constitute the federally enforceable portions of this permit to install.

**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>
P003 - GE 7FA simple combustion turbine, 167 MW (nominal)		N/A

2. **Additional Terms and Conditions**

None.

**II. Operational Restrictions**

None

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

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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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>	<u>Applicable Rules/Requirements</u>
P004 - GE 7FA simple combustion turbine, 167 MW (nominal)	OAC Rule 3745-31-05 (A)(3)

	Applicable Emissions Limitations/Control Measures	
	control requirements, see A.I.2.a.	42 ppmvd NO <sub>x</sub> at 15% Oxygen 0.1765 lb NO <sub>x</sub> /MM Btu heat input 351.0 lbs NO <sub>x</sub> /hr & 180.8 tons NO <sub>x</sub> /yr
OAC Rule 3745-31-05 (D)	when firing natural gas, emissions shall not exceed: 9 ppmvd nitrogen oxides (NO <sub>x</sub> ) at 15% Oxygen 0.037 lb NO <sub>x</sub> /MM Btu heat input 65.0 lbs NO <sub>x</sub> /hr & 241.0 tons NO <sub>x</sub> /yr	0.052 lb SO <sub>2</sub> /MM Btu heat input 103.0 SO <sub>2</sub> /hr & 52.8 tons SO <sub>2</sub> /year 0.036 lb CO/MM Btu heat input 72.0 lbs CO/hr & 36.9 tons CO/yr
OAC Rule 3745-17-07	0.0015 lb sulfur dioxide (SO <sub>2</sub> )/MM Btu heat input 2.4 lbs SO <sub>2</sub> /hr & 10.0 tons SO <sub>2</sub> /year	0.0040 lb VOC/MM Btu heat input 8.0 lbs VOC/hr & 4.1 tons VOC/year, 0.020 lb PE/MM Btu heat input 39.0 lbs PE/hr & 20.0 tons PE/yr
OAC Rule 3745-17-11 (B)(4)	0.018 lb carbon monoxide (CO)/MM Btu heat input 32.0 lbs CO/hr & 133.0 tons CO/yr	0.48 lb formaldehyde/hr & 0.3 tons formaldehyde/yr 11.0 lbs sulfuric acid/hr & 5.6 tons sulfuric acid/yr
OAC rule 3745-18-06(F)	0.0017 lb volatile organic compounds (VOC)/MM Btu heat input 3.0 lbs VOC/hr & 12.5 tons VOC/year,	operational restrictions, see A.II.1.
40 CFR Part 60, Subpart GG	0.010 lb particulate emissions (PE)/MM Btu heat input 18.0 lbs PE/hr & 74.8 tons PE/yr	group emissions limits from P001, P002 P003 and P004 combined of: 52.8 tons SO <sub>2</sub> , 133.0 tons CO, 241.0 tons NO <sub>x</sub> , 74.8 tons PE, 7.0 tons of any individual HAP, 25 tons of combined HAPs (see A.I.2.e.), per rolling 12-month period
40 CFR Part 75	1.7 lbs formaldehyde/hr & 7.0 tons formaldehyde/yr	25 tons of combined HAPs (see A.I.2.e.), per rolling 12-month period
OAC Rule 3745-103	1.1 lbs sulfuric acid/hr & 4.6 tons/sulfuric acid/yr	visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule
	visible particulate emissions shall not exceed 10 percent opacity as a six-minute average	See A.I.2.b.
	when firing #2 Oil/Distillate Oil, emissions shall not exceed:	See A.I.2.b. See A.I.2.c.

See A.I.2.d.

See A.I.2.d.

## **2. Additional Terms and Conditions**

- 2.a** The permittee shall install and maintain dry low NOx burners and a water injection system on this emissions unit.
- 2.b** The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.c** The emissions limits based on this applicable rule are 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.d** If the permittee is subject to the requirements of 40 CFR Part 75 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.
- 2.e** The emissions of Hazardous Air Pollutants (HAPs), as defined in Section 112(b) of the Clean Air Act, from emissions units P001, P002, P003 and P004 combined, shall not exceed 7.0 tons per year for an individual HAP and 25 tons per year for any combination of HAPs, per rolling 12 month period.

## **II. Operational Restrictions**

- 1. The maximum annual fuel usage for emissions units P001, P002, P003 and P004 combined, shall not exceed any of the following:
  - a. 14,020 million cubic feet of natural gas per rolling 12-month period;
  - b. 15.77 million gallons of #2 oil/distillate oil usage per rolling 12-month period;
  - c. a cumulative 14,020 million cubic feet fuel (natural gas and #2 oil/distillate oil usage) per rolling 12-month period where:
    - 1 million cubic feet of natural gas = 1 million cubic feet of fuel and;

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1 million gallons of #2 oil fuel oil = 889 million cubic feet of fuel

To ensure enforceability during the first 12 calendar months following startup\*, the permittee shall not exceed the fuel usage restrictions specified in the following table:

Month	Cumulative Summation of fuel usage (million cubic feet)
1	3,500
1-2	7,000
1-3	10,500
1-4	13,000
1-12	14,020

After the first 12 calendar months following the startup, compliance with the annual usage restrictions shall be based on a rolling, 12-month summation.

\*Startup for the facility shall be defined as the date when emissions units P001, P002, P003, **or** P004 is set in operation for any purpose. Start-up for the daily operation of the turbine is defined in condition A.II.2. and AII.3. below.

- As specified in the permittee's PTI application, the maximum design electric output of this unit is 191.2 MW\*, measured at the generator terminal, when firing natural gas. This value corresponds to a maximum natural gas flow of 1.88 million cf/hr with a lower heat value of 931 Btu/cf (1749.5 MM Btu/hr), at -10 degrees F. As specified in the permittee's PTI application, the maximum design electric output of this unit is 196.9 MW\*, measured at the generator terminal, when using #2 oil/distillate oil. This value corresponds to a maximum fuel flow of 15,306 gallons/hr with a lower heat value of 129,930 Btu/gallon (1988.7 MM Btu/hr), at -10 degrees F. The permittee shall operate this emissions unit within the design electric output of the system as specified above, except for start-up and shutdown. Start-up shall be defined as the time necessary to bring the unit to its minimum operating temperature (as recommended by the vendor), but under no circumstances shall it exceed 60 minutes in duration. Shutdown periods shall not exceed 60 minutes in duration.

\* The short term emission limits in this permit are based on these maximum heat input rates, and represent the worst case emissions. Variables in determining short term emissions include siting requirements for the facility, quality of fuel, fuel flow rate with respect to ambient temperature, and operational demands from the customer. The Ohio EPA is aware that extreme temperature conditions impact the capacity of the unit and the agency may adjust the potential to emit of the emissions units accordingly.

- With the exception of startup and shutdown, emissions unit P004 shall be operated at minimum of

50% load. The permittee may petition the Ohio EPA, Northwest District Office (NWDO) to operate at a greater load range if it can demonstrate to the agency's satisfaction that the emissions unit will comply with all applicable emission limits in this permit, and modeling requirements pursuant to Engineering Guide no. 69.

4. The permittee shall burn only natural gas and #2 oil/distillate oil in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 0.5 grain/scf. The maximum sulfur content of the #2 oil/distillate oil shall not exceed 0.05 percent by weight.

### III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information for emissions units P001, P002, P003, and P004 combined:
  - a. the quantity natural gas fired, in million cubic feet ;
  - b. the quantity of #2 oil/distillate oil fired, in gallons;
  - c. the monthly emission rate\* for PE, NO<sub>x</sub>, SO<sub>2</sub>, CO, any individual and combined HAP, in tons; and
  - d. during the first 12 calendar months of operation following startup, the quantity of natural gas fired, #2 oil/distillate oil fired, and the cumulative fuel usage (as defined in A.II.1.c.);
  - e. beginning the first 12 calendar months of operation following startup, the rolling, 12-month summation of the quantity of natural gas fired, #2 oil/distillate oil fired, and the cumulative fuel usage (as defined in A.II.1.c.);
  - f. during the first 12 calendar months of operation following startup, the cumulative emission rate for PE, NO<sub>x</sub>, SO<sub>2</sub>, CO, any individual and combined HAP; and
  - g. beginning the first 12 calendar months of operation following startup, the rolling, 12-month summation of the emission rate for PE, NO<sub>x</sub>, SO<sub>2</sub>, CO, any individual and combined HAP.

\* The permittee shall use the most recent testing/emissions data available for each respective pollutant, in conjunction with the quantity of fuel fired, as recorded above, to determine monthly emissions. The monthly emissions calculated above may include an

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adjustment for the average ambient temperature for that month the unit is operating.

2. For each day during which the permittee burns a fuel other than natural gas or #2 oil/distillate oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
3. The information management system for this emissions unit shall be capable of monitoring and recording electric output (in MW), fuel flow (gallons and million cu ft), and hours of operation.
4. The permittee shall maintain documentation on the sulfur contents and heating values of the fuels received as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels. The permittee shall determine the heat value of the fuels using ASTM method D240. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Ohio EPA, NWDO. The newest or most recent revisions to the applicable test method shall be used for these analyses. Alternative, equivalent methods may be used if they comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75, or upon written approval by the Ohio EPA, NWDO. The frequency of the sampling shall be such that it complies with the requirements specified in 40 CFR Part 60.334 and/or 40 CFR Part 75 or as approved by the Ohio EPA.
5. Except for periods described in 40 CFR part 60.13, the permittee shall install, operate, and maintain 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 specified in 40 CFR Part 60.13 and/or 40 CFR Part 75 or as approved by the Ohio EPA.

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 (with an hourly averaging period), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

\* The installation and operation of systems to continuously monitor and record emissions of NO<sub>x</sub> may be performed in lieu of continuously monitoring the fuel consumption, water ratio, and nitrogen content of the fuel being fired in the turbine, as required by 40 CFR 60.334.

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or #2 oil/distillate oil was burned in this emissions unit. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(1).
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month fuel usage limitations and, for the first 12 calendar months of operation, all exceedances of the maximum allowable fuel usage. These reports are due by the date described in

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Part 1 - General Terms and Conditions of this permit under section (A)(1).

3. The permittee shall submit quarterly reports which identify each period during which an exemption for ice-fog provided in 40 CFR 60.332(f) is in effect. The report shall include the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time when the air pollution control system was reactivated.
4. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 0.5 grain/scf, or the sulfur content of the #2 Oil/Distillate Oil exceed the 0.05% by weight limit established in this permit. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).
5. 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 Ohio EPA, NWDO documenting the date, commencement and completion times, duration, magnitude, reason (i.e., startup and shutdown periods as defined in Condition A.II.3. above, malfunctions, extreme temperature conditions, etc.), and corrective actions taken (if any), of all instances of NO<sub>x</sub> values in excess of the applicable limits specified in the terms and conditions of this permit. These reports shall also contain the total NO<sub>x</sub> emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, NWDO documenting any continuous NO<sub>x</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 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.

6. 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 Ohio EPA, NWDO within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

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7. The permittee shall submit deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the requirements of condition A.II.3. above. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).
8. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess and emissions reports for emissions unit P001 in accordance with this permit.
9. This emissions unit is subject to the applicable provisions of Subpart 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  
Northwest District Office  
Division of Air Pollution Control  
347 North Dunbridge Road  
Bowling Green, Ohio 43402

## **V. Testing Requirements/Compliance Methods Determinations**

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> outlet concentrations, the lbs/MM Btu limitations for NO<sub>x</sub>\*, CO, VOC, SO<sub>2</sub>, and PE, and the mass emissions limitations for NO<sub>x</sub>, CO, VOC, and PE, while firing both natural gas and #2 oil/distillate oil. Emission testing shall be conducted to demonstrate compliance with the mass emissions limitation for Formaldehyde while firing natural gas.
  - 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 PE, Method 5 of 40 CFR Part 60, Appendix A; for Formaldehyde, SW-846 Method 0011; for VOC Method 25 of 40 CFR Part 60, Appendix A; SO<sub>2</sub> Method 6 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 performed at peak load (as defined by 40 CFR Part 60, Subpart GG), unless otherwise specified or approved by the Ohio EPA, NWDO.
  - e. Not later than 45 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, NWDO. 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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA, NWDO refusal to accept the results of the emission tests.
  - f. Personnel from the Ohio EPA, NWDO shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
  - g. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, NWDO within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

\* In lieu of the test methods and procedures required under 40 CFR Part 60.335, the permittee shall follow the testing requirements in accordance with this permit.

2. Within 60 days after achieving the maximum production rate at which the 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 NO<sub>x</sub> monitoring system pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and/or 40 CFR Part 75. Personnel from the Ohio EPA, NWDO 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 sent within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, NWDO 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 ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and/or 40 CFR Part 75.
  
3. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:
  - a. Emission Limitation  
 when firing natural gas:  
 65.0 lbs NO<sub>x</sub>/hr 241.0 tons NO<sub>x</sub>/yr  
 0.037 lb NO<sub>x</sub>/MM Btu heat input  
 9 ppmvd at 15% Oxygen  
  
 when firing #2 oil:  
 351.0 lbs NO<sub>x</sub>/hr 180.8 tons NO<sub>x</sub>/yr  
 0.1765 lb NO<sub>x</sub>/MM Btu heat input  
 42 ppmvd at 15% Oxygen  
  
Applicable Compliance Method  
 Compliance with the allowable outlet concentration and the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1 and continuous emissions monitoring requirement as described in conditions A.III.2 5. and A.V.2. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.
  
  - b. Emission Limitation  
 when firing natural gas:  
 18.0 lbs PE/hr 74.8 tons PE/yr  
 0.010 lb PE/MM Btu heat input  
  
 when firing #2 oil:  
 39.0 lbs PE/hr 20.0 tons PE/yr  
 0.02 lb PE/MM Btu heat input

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Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

c. Emission Limitation

when firing natural gas:

2.4 lbs SO<sub>2</sub>/hr 10.0 tons SO<sub>2</sub>/yr  
0.0015 lb SO<sub>2</sub>/MM Btu heat input

when firing #2 oil:

103.0 lbs SO<sub>2</sub>/hr 52.8 tons SO<sub>2</sub>/yr  
0.052 lb SO<sub>2</sub>/MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

d. Emission Limitation

when firing natural gas:

3.0 lbs VOC/hr, 12.5 tons VOC/yr  
0.0017 lb VOC /MM Btu heat input

when firing #2 oil:

8.0 lbs VOC/hr, 4.1 tons VOC/yr  
0.004 lb VOC/MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

e. Emission Limitation

when firing natural gas:

32.0 lbs CO/hr & 133.0 tons CO/yr  
0.018 lb CO /MM Btu heat input

when firing #2 oil:

72.0 lbs CO/hr & 36.9 tons CO/yr

0.036 lb CO /MM Btu heat input

Applicable Compliance Method

Compliance with the lbs/hr & lb/MM Btu heat input emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the maximum lbs/MM Btu rates above by the maximum fuel usage and heat values for each respective fuel as described in condition A.II.1. and A.II.2.

f. Emission Limitation

when firing natural gas:

1.7 lb formaldehyde/hr, 7.0 tons formaldehyde/yr

while firing #2 oil:

0.48 lb formaldehyde/hr, 0.3 ton formaldehyde/yr

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Applicable Compliance Method

Compliance with the lbs/hr emission limitation when firing natural gas shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the lbs/hr emission limitation when firing #2 oil shall be demonstrated by the multiplying the AP 42 emission factor table 3.1-4 (4/00) by the maximum fuel usage defined in condition A.II..2. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitations shall be determined by multiplying the above hourly emission limit by the annual hours of operation.

g. Emission Limitation

when firing natural gas:

1.1 lb sulfuric acid/hr 4.6 ton sulfuric acid/yr

while firing #2 oil:

11.0 lbs sulfuric acid/hr 5.6 tons sulfuric acid/yr

Applicable Compliance Method

The lb/hr emission rate for sulfuric acid mist is based on the manufacturers performance specification for this pollutant while firing #2 oil and natural gas. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitations shall be determined by multiplying the above hourly emission limit by the annual hours of operation.

h. Emission Limitation

Visible particulate emissions when burning natural gas shall not exceed 10 percent opacity as a six-minute average.

Visible particulate emissions shall not exceed 20 percent opacity as a six-minute average.

Applicable Compliance Method

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

i. Emission Limitation

52.8 tons of SO<sub>2</sub> per rolling 12-month period

133.0 tons of CO per rolling 12-month period

241.0 tons of NO<sub>x</sub> per rolling 12-month period

74.8 tons PE per rolling 12-month period

7.0 tons of any individual HAP per rolling 12-month period

25 tons of combined HAP per rolling 12-month period

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III.1.

**VI. Miscellaneous Requirements**

1. Should this emissions unit be converted from a simple cycle to a combined cycle turbine in the future, a new BAT determination would be required.
2. 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 30 days of the start-up of this emissions unit, 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 40 CFR Part 60, Appendix F and/or 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.

3. In accordance with OAC rule 3745-31-05(D), sections A.II.1 through A.VI.2. of the terms and conditions constitute the federally enforceable portions of this permit to install.

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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>
P004 - GE 7FA simple combustion turbine, 167 MW (nominal)	N/A	

**2. Additional Terms and Conditions**

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>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
T001 - 2,200,000 #2 fuel oil fixed roof storage tank	OAC rule 3745-31-05(A)(3)	Use of submerged fill  0.1 ton VOC/yr  See A.I.2.a.
	OAC rule 3745-21-09(L)	Exempt (See A.II.1.)
	40 CFR 60, Subpart Kb	See A.II.1
		Recordkeeping requirements (See A.III.1 and A.III.2)

##### 2. Additional Terms and Conditions

- 2.a The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Kb.

##### II. Operational Restrictions

1. The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than or equal to 5.2 kPa (0.75 psia).
2. The annual material throughput for this emissions unit shall not exceed 15,770,000 gallons per year.

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

1. The application and enforcement of the provisions of the New Source Performance Standards

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(NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

In accordance with 40 CFR 60.116b (a)(b)(c) and (d), the owner and operator of this emissions unit shall maintain records of the following information:

- a. the types of petroleum liquids stored in the tank;
  - b. the period of storage; and
  - c. the maximum true vapor pressure (in pounds per square inch absolute), during the storage period.
  - d. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel (shall be kept for the life of the source).
2. Available data may be used to determine the maximum true vapor pressure, as follows:
- a. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.
  - b. For crude oil or refined petroleum products, the vapor pressure may be obtained by the following:
    - i. Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference--see Sec. 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).
    - ii. The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

- c. For other liquids, the vapor pressure:
  - i. may be obtained from standard reference texts; or
  - ii. determined by ASTM Method D2879-83 (incorporated by reference--see Sec. 60.17); or
  - iii. measured by an appropriate method approved by the Administrator; or
  - iv. calculated by an appropriate method approved by the Administrator.
3. The permittee of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.
  - a. Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in section A.III.3.
  - b. For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in 40 CFR 60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:
    - i. ASTM Method D2879-83 (incorporated by reference--see 40 CFR. 60.17); or
    - ii. ASTM Method D323-82 (incorporated by reference--see 40 CFR 60.17); or
    - iii. as measured by an appropriate method as approved by the Administrator.
4. The permittee shall maintain monthly records of the amount (gallons per month and total gallons, to date for the calendar year) of material throughput for this emissions unit.

#### IV. Reporting Requirements

1. If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is equal to or greater than 0.75 pound per square inch absolute (5.2 kPa), the permittee shall notify the Ohio EPA, NWDO within 30 days of becoming aware of the occurrence.
2. The permittee shall submit annual deviation (excursion) reports that identify any and all exceedances of the annual material throughput limitation, as well as the corrective actions taken to achieve compliance. These reports shall be submitted by January 31 of each year.

#### V. Testing Requirements

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Emissions Unit ID: T001

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

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Emissions Unit ID: T001

- a. Emission Limitation: 0.1 tons VOC/yr

Applicable Compliance Method:

The emission limitation was established in accordance with EPA, AP-42 Tanks 3.1 computer program using a maximum annual throughput of 15,770,000 gallons. Compliance shall be determined in accordance with the monitoring and record keeping specified in section C.4.

**VI. Miscellaneous Requirements**

None

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Emissions Unit ID: T001

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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>
T001 - 2,200,000 #2 fuel oil fixed roof storage tank		

**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

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PTI A

Emissions Unit ID: T002

Issued: 10/05/2000

**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>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
T002 - 2,200,000 gallon #2 fixed roof oil storage tank	OAC rule 3745-31-05(A)(3)	Use of submerged fill  0.1 ton VOC/yr  See A.I.2.a.
	OAC rule 3745-21-09(L)	Exempt (See A.II.1.)
	40 CFR 60, Subpart Kb	See A.II.1
		Recordkeeping requirements (See A.III.1 and A.III.2)

**2. Additional Terms and Conditions**

- 2.a The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Kb.

**II. Operational Restrictions**

1. The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than or equal to 5.2 kPa (0.75 psia).
2. The annual material throughput for this emissions unit shall not exceed 15,770,000 gallons per year.

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**PTI Application: 02 12262**  
**Issued**

**Facility ID: 0387000377**

Emissions Unit ID: T002

### III. Monitoring and/or Recordkeeping Requirements

1. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

In accordance with 40 CFR 60.116b (a)(b)(c) and (d), the owner and operator of this emissions unit shall maintain records of the following information:

- a. the types of petroleum liquids stored in the tank;
  - b. the period of storage; and
  - c. the maximum true vapor pressure (in pounds per square inch absolute), during the storage period.
  - d. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel (shall be kept for the life of the source).
2. Available data may be used to determine the maximum true vapor pressure, as follows:
    - a. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.
    - b. For crude oil or refined petroleum products, the vapor pressure may be obtained by the following:
      - i. Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference--see Sec. 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

- ii. The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.
      - c. For other liquids, the vapor pressure:
        - i. may be obtained from standard reference texts; or
        - ii. determined by ASTM Method D2879-83 (incorporated by reference--see Sec. 60.17); or
        - iii. measured by an appropriate method approved by the Administrator; or
        - iv. calculated by an appropriate method approved by the Administrator.
3. The permittee of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.
  - a. Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in section A.III.3.
  - b. For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in 40 CFR 60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:
    - i. ASTM Method D2879-83 (incorporated by reference--see 40 CFR. 60.17); or
    - ii. ASTM Method D323-82 (incorporated by reference--see 40 CFR 60.17); or
    - iii. as measured by an appropriate method as approved by the Administrator.
4. The permittee shall maintain monthly records of the amount (gallons per month and total gallons, to date for the calendar year) of material throughput for this emissions unit.

#### IV. Reporting Requirements

1. If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is equal to or greater than 0.75 pound per square inch absolute (5.2 kPa),

**Troy Energy, LLC**  
**PTI Application: 02 12262**  
**Issued**

**Facility ID: 0387000377**

Emissions Unit ID: T002

the permittee shall notify the Ohio EPA, NWDO within 30 days of becoming aware of the occurrence.

2. The permittee shall submit annual deviation (excursion) reports that identify any and all exceedances of the annual material throughput limitation, as well as the corrective actions taken to achieve compliance. These reports shall be submitted by January 31 of each year.

**Troy I**

**PTI A**

Emissions Unit ID: T002

**Issued: 10/05/2000**

**V. Testing Requirements**

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

- a. Emission Limitation: 0.1 ton VOC/yr

Applicable Compliance Method:

The emission limitation was established in accordance with EPA, AP-42 Tanks 3.1 computer program using a maximum annual throughput of 15,770,000 gallons. Compliance shall be determined in accordance with the monitoring and record keeping specified in section C.4.

**VI. Miscellaneous Requirements**

None

Troy I

PTI A

Emissions Unit ID: T002

Issued: 10/05/2000

**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>
T002 - 2,200,000 #2 oil fixed roof storage tank		N/A

**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

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**Troy I**

**PTI A**

**Issued: 10/05/2000**

Emissions Unit ID: T002

**NEW SOURCE REVIEW FORM B**

PTI Number: 03-13362 Facility ID: 0387000377

FACILITY NAME Troy Energy, LLC

FACILITY DESCRIPTION Peaking Station CITY/TWP Luckey

SIC CODE 4911 SCC CODE 2-03-002-02 EMISSIONS UNIT ID P001

EMISSIONS UNIT DESCRIPTION 167 MW GE-7FA simple cycle combustion turbine

DATE INSTALLED 8-01

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	39.0	8.9	39.0	74.8
PM <sub>10</sub>					
Sulfur Dioxide	Attainment	103.0	6.3	103.0	52.8
Organic Compounds	Attainment	8.0	1.5	8.0	12.5
Nitrogen Oxides	Attainment	322.2	28.8	351.0	241.0
Carbon Monoxide	Attainment	72.0	15.8	72.0	133.0
Lead					
Sulfuric Acid		11.0	0.7	11.0	5.6
Formaldehyde		1.7	0.4	1.7	7.0

APPLICABLE FEDERAL RULES:

NSPS? Subpart GG

NESHAP?

PSD?

OFFSET POLICY?

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

**Compliance with BACT and the terms and conditions in this permit**

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$N/A

**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        NOIDENTIFY THE AIR CONTAMINANTS: Formaldehyde

**NEW SOURCE REVIEW FORM B**

PTI Number: 03-13362

Facility ID: 0387000377

FACILITY NAME Troy Energy, LLC

FACILITY DESCRIPTION Peaking Station

CITY/TWP Luckey

Emissions Unit ID: T002

SIC CODE 4911

SCC CODE 2-03-002-02

EMISSIONS UNIT ID P002

EMISSIONS UNIT DESCRIPTION 167 MW GE-7FA simple cycle combustion turbine

DATE INSTALLED 8-01

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	39.0	8.9	39.0	74.8
PM <sub>10</sub>					
Sulfur Dioxide	Attainment	103.0	6.3	103.0	52.8
Organic Compounds	Attainment	8.0	1.5	8.0	12.5
Nitrogen Oxides	Attainment	322.2	28.8	351.0	241.0
Carbon Monoxide	Attainment	72.0	15.8	72.0	133.0
Lead					
sulfuric acid		11.0	0.7	11.0	5.6
formaldehyde		1.7	0.4	1.7	7.0

APPLICABLE FEDERAL RULES:

NSPS? **Subpart GG**

NESHAP?

PSD?

OFFSET POLICY?

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

**Enter Determination**IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$N/A**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        NOIDENTIFY THE AIR CONTAMINANTS: formaldehyde

**NEW SC**

PTI Num

FACILITY

Emissions Unit ID: T002

FACILITY DESCRIPTION Peaking Station

CITY/TWP Luckey

SIC CODE 4911

SCC CODE 2-03-002-02

EMISSIONS UNIT ID P003

EMISSIONS UNIT DESCRIPTION 167 MW GE-7FA simple cycle combustion turbine

DATE INSTALLED 8-01

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	39.0	8.9	39.0	74.8
PM <sub>10</sub>					
Sulfur Dioxide	Attainment	103.0	6.3	103.0	52.8
Organic Compounds	Attainment	8.0	1.5	8.0	12.5
Nitrogen Oxides	Attainment	322.2	28.8	351.0	241.0
Carbon Monoxide	Attainment	72.0	15.8	72.0	133.0
Lead					
sulfuric acid		11.0	0.7	11.0	5.6
formaldehyde		1.7	0.4	1.7	7.0

APPLICABLE FEDERAL RULES:

NSPS? **Subpart GG**

NESHAP?

PSD?

OFFSET POLICY?

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

**Enter Determination**

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$N/A

**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to containinants 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: formaldehyde

**NEW SOURCE REVIEW FORM B**

PTI Number: 03-13362

Facility ID: 0387000377

FACILITY NAME Troy Energy, LLC

FACILITY DESCRIPTION Peaking Station

CITY/TWP Luckey

Emissions Unit ID: T002

SIC CODE 4911

SCC CODE 2-03-002-02

EMISSIONS UNIT ID P004

EMISSIONS UNIT DESCRIPTION 167 MW GE-7FA simple cycle combustion turbine

DATE INSTALLED 8-01

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	39.0	8.9	39.0	74.8
PM <sub>10</sub>					
Sulfur Dioxide	Attainment	103.0	6.3	103.0	52.8
Organic Compounds	Attainment	8.0	1.5	8.0	12.5
Nitrogen Oxides	Attainment	322.2	28.8	351.0	241.0
Carbon Monoxide	Attainment	72.0	15.8	72.0	133.0
Lead					
sulfuric acid		11.0	0.7	11.0	5.6
formaldehyde		1.7	0.4	1.7	7.0

APPLICABLE FEDERAL RULES:

NSPS? **Subpart GG**

NESHAP?

PSD?

OFFSET POLICY?

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

**Enter Determination**IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$N/A**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\*?

Yes

YES

NOIDENTIFY THE AIR CONTAMINANTS: formaldehyde

**NEW SOURCE REVIEW FORM B**

PTI Number: 03-13362 Facility ID: 0387000377

FACILITY NAME Troy Energy, LLC

FACILITY

Emissions Unit ID: T002

SIC CODE 4911 SCC CODE 4-03-010-21 &amp; 4-03-010-20 EMISSIONS UNIT ID T001

EMISSIONS UNIT DESCRIPTION 2,200,000 #2 fuel oil fixed roof storage tank

DATE INSTALLED 8-01

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					
PM <sub>10</sub>					
Sulfur Dioxide					
Volatile Organic Compounds			0.1		0.1
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? Subpart Kb

NESHAP? N/A

PSD? N/A

OFFSET POLICY? N/A

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

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ N/A

**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\*? \_\_\_\_\_ YES X NO

IDENTIFY THE AIR CONTAMINANTS: \_\_\_\_\_



**NEW SOURCE REVIEW FORM B**

PTI Number: 03-13362

Facility ID: 0387000377

FACILITY NAME Troy Energy, LLC

FACILITY DESCRIPTION Four 1,570 mmBTU/hr combustion turbines.

CITY/TWP Luckey

Emissions Unit ID: T002

**These are 4 identical turbines. Air toxics modeling was run separately from the incremental modeling included in the application.**

**Permit To Install Synthetic Minor Write-Up**

**A. Source Description**

Troy energy, LLC is planning to install a new peaking station in Luckey Ohio, Wood County. The facility will generate electricity during periods of high demand to alleviate potential capacity shortfalls and will consist of four 167 MW natural gas/#2 oil fired electric generators. Troy energy, LLC has requested to limit the annual fuel usage for the facility to avoid PSD and 112(g) permitting requirements.

**B. Facility Emissions**

The facility will emit particulates, sulfur dioxide, nitrogen oxides, carbon monoxide above major source thresholds for PSD permitting requirements. The facility will emit hazardous air pollutants above major source thresholds for 112(g) permitting requirements. At 8760 hrs, the facility has potential emissions of 6150 tons per year (tpy) of nitrogen oxides, 1265 tpy of carbon monoxide, 1812 tpy of sulfur dioxide and 884 tpy of particulates and 29 tpy of HAPs.

**C. Operating Limitations**

Troy energy, LLC has requested a federally enforceable limit on their annual fuel usage for the facility of 14,020,000,000 cubic feet of natural gas per rolling 12-month period. While the facility if firing #2 oil, the allowable quantity of fuel is reduced proportionately. This would restrict the facility's potential emissions to 133.0 tons of carbon monoxide, 241.0 tons of nitrogen oxides, 52.8 tons sulfur dioxide, 74.8 tons particulate emissions, and 7.0 tons HAP per rolling 12-month period.

**D. Conclusions**

By restricting fuel usage, the terms and conditions of this permit to install will limit the facility's nitrogen oxide, sulfur dioxide, particulate matter, and carbon monoxide emissions to less than PSD thresholds and HAP emissions to less than 112(g) threshold levels. Excursion reports will be required for each emissions unit to ensure compliance.

**Please fill in the following for this permit:**

**TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

**Pollutant**

**Tons Per Year**

95 NEW SC

PTI Num:

FACILITY

Emissions Unit ID: T002

FACILITY DESCRIPTION

Four 1,570 mmBTU/hr combustion turbines.

CITY/TWP

Luckey

**NOx**

**241.0**

**CO**

**133.0**

**VOC**

**12.7**

**PE**

**74.8**

**SO2**

**52.8**

**Sulfuric Acid**

**5.6**

**Formaldehyde**

**7.0**