State of Ohio Environmental Protection Agency

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

Street Address:
122 S. Front Street

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

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049

Application No: 01-08284

DATE: 2/6/2001

American Electric Power
Michael Robida
1 Riverside Plaza
Columbus, OH 43215

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

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

CC: USEPA **CDO**

FINAL PERMIT TO INSTALL 01-08284

Application Number:	01-08284
APS Premise Number:	0125101864
Permit Fee:	**$1200**
Name of Facility:	American Electric Power
Person to Contact:	Michael Robida
Address:	1 Riverside Plaza Columbus, OH 43215

Location of proposed air contaminant source(s) [emissions unit(s)]:
4001 Bixby Rd
Groveport, **Ohio**

Description of proposed emissions unit(s):
1.2 mw gas fired combustion turbine.

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

Part I - GENERAL TERMS AND CONDITIONS

A. 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 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 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. Records Retention Requirements

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.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. 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 verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. 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 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. 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 emissions unit(s) that is (are) served by such control system(s).

6. 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.

7. 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.

8. 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.

9. 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.

10. 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.

11. 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).

12. Best Available Technology

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

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This 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 emissions unit(s) covered by this permit.

14. 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.

15. 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.

B. Permit to Install Summary of Allowable Emissions

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

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

Pollutant	Tons Per Year
PM	2.6
NOx	50.7
VOC	4.0
CO	35.45

Emissions Unit ID: **B001**

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements
	OAC rule 3745-17-07(A)(1)(a)
B001 - CSI 145 HP 15.8 MMBTU/hr Natural Gas Fired Compressor NGC 004	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-11(B)(5)

Applicable Emissions
Limitations/Control Measures

Particulate emissions shall not exceed 0.31 pound per hour and 1.37 ton per year. See A.2.a., below.

Nitrogen Oxide emissions shall not exceed 5.27 pound per hour and 23.1 ton per year.

Carbon Monoxide emissions shall not exceed 5.19 pound per hour and 22.75 ton per year.

Volatile Organic Compound emissions shall not exceed 0.64 pound per hour and 2.8 ton per year.

Compliance with this rule also includes compliance with the requirements of OAC rule 3745-17-07(A)(1)(a).

The emissions limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

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

2. Additional Terms and Conditions

2.a The short term limitations of 0.31 lb PM/hr, 5.27 lb NOx/hr, 0.64 lb VOC/hr and 5.19 lb CO/hr were established for PTI purposes reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

B. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

C. Monitoring and/or Recordkeeping Requirements

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

D. Reporting Requirements

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

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation -
0.31 lb PM/hr

Applicable Compliance Method -
Compliance shall be demonstrated by using the appropriate emission factors from "Compilation of Air Pollutant Emission Factors", Fifth Edition (AP-42) Table 3.1-1, or if required, testing of the exhaust stack, using Methods 1 through 5, found in 40 CFR Part 60, Appendix A:

Pollutant	Emission Factor	Source of Factor
PM w/ natural gas	0.02 lb/MM Btu	AP-42 Table 3.1-1

15.8 MMBTU/hr * 0.02 lb PM/MMBTU = 0.31 lb PM/hr;

Emission Limitation -
1.37 ton PM/yr

Applicable Compliance Method -
Compliance shall be determined by multiplying the maximum hourly allowable of 0.31 pounds particulate matter times the maximum operating hours;
0.4 lb PM/hr * 8760 hrs/yr * 1 ton/2,000 lb = 1.37 ton PM/yr;

b. Emission Limitation -
5.27 lb NOx/hr

Applicable Compliance Method -
Compliance shall be determined by multiplying the maximum rated horsepower times the an emission factor of 16.5 grams NOx per horsepower hour (Caterpillar G3306-NA, Rich burn, natural aspiration) and dividing by 454 grams per pound:
16.5 gr NOx/bhp-hr * 145 bhp * 1 lb/454 gr = 5.27 lb NOX/hr;

Emission Limitation -
23.1 ton NOx/yr

Applicable Compliance Method -
Compliance shall be determined by multiplying the maximum hourly allowable of 5.27 pounds NOx times the maximum operating hours:
5.27 lb NOX/hr * 8760 hr/yr * 1 ton/2,000 lb = 23.10 ton NOx/yr;

c. Emission Limitation -
5.19 lb CO/hr

Applicable Compliance Method -
Compliance shall be determined by multiplying the maximum rated horsepower times the an emission factor of 16.25 grams CO per horsepower hour (Caterpillar G3306-NA, Rich burn, natural aspiration) and dividing by 454 grams per pound:
16.25 gr CO/bhp-hr * 145 bhp * 1 lb/454 gr = 5.19 lb CO/hr;

Emission Limitation -
22.75 ton CO/yr

Applicable Compliance Method -
Compliance shall be determined by multiplying the maximum hourly allowable of 26.25

pounds CO times the maximum operating hours:
5.19 lb CO/hr * 8760 hr/yr * 1 ton/2,000 lb = 22.75 ton COx/yr

d. Emission Limitation -
0.64 lb VOC/hr

Applicable Compliance Method -
Compliance shall be determined by multiplying the maximum rated horsepower times the an emission factor of 2.0 grams VOC per horsepower hour (Caterpillar G3306-NA, Rich burn, natural aspiration) and dividing by 454 grams per pound:
2.0 gr VOC/bhp-hr * 145 bhp * 1 lb/454 gr = 0.64 lb VOC/hr;

Emission Limitation -
2.8 ton VOC/yr

Applicable Compliance Method -
Compliance shall be determined by multiplying the maximum hourly allowable of 2.6 pounds VOC times the maximum operating hours:
0.64 lb VOC/hr * 8760 hr/yr * 1 ton/2,000 lb = 2.8 ton VOC/yr; and,

e. Emissions Limitation:
Visible particulate emissions from the stack shall not exceed 20% opacity, as a six-minute average.

Applicable Compliance Method:
If required, compliance shall be demonstrated through visible emissions observation performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

F. Miscellaneous Requirements

None

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P003 - 1.2 MW Gas-Fired Combustion Turbine 003	OAC rule 3745-31-05(A)(3)	Particulate emissions shall not exceed 0.31 pound per hour and 1.37 ton per year. See A.2.a., below. Nitrogen Oxide emissions shall not exceed 6.3 pound per hour and 27.6 ton per year. Carbon Monoxide emissions shall not exceed 2.9 pound per hour and 12.7 ton per year. Volatile Organic Compound emissions shall not exceed 0.28 pound per hour and 1.23 ton per year. Compliance with this rule also includes compliance with the requirements of OAC rules 3745-17-07(A)(1)(a) and 3745-17-11(A)(2).
	OAC rule 3745-17-11(A)(2)	Particulate emissions shall not exceed 0.04 pound per MMBTU of fuel input.
	OAC rule 3745-17-07(A)(1)(a)	Visible particulate emissions shall not

exceed twenty percent opacity, as a six-minute average, except as provided by rule.

2. Additional Terms and Conditions

2.a The short term limitations of 6.3 lb NOx/hr, 0.28 lb VOC/hr, 0.31 lb PM/hr and 2.9 lb CO/hr were established for PTI purposes reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

B. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

C. Monitoring and/or Recordkeeping Requirements

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

D. Reporting Requirements

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

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation -
6.3 lb NOx/hr

Applicable Compliance Method -
Compliance shall be determined based on USEPA Method 7e test data (February 22, 2000 - Gas Power Northwest, Inc) at maximum load yielding:
98 ppmv * 8,948 dscf/min * 46 g/mole/385.1 e6 * 60 min/hr = 6.28 lb/hr

Emission Limitation -
27.6 ton NOx/yr

Applicable Compliance Method -

Emissions Unit ID: **P003**

Compliance shall be determined by multiplying the maximum hourly allowable of 2.6 pounds NOx times the maximum operating hours:
6.28 lb NOX/hr * 8760 hr/yr * 1 ton/2,000 lb = 27.5 ton NOx/yr;

b. Emission Limitation -
2.9 lb CO/hr

Applicable Compliance Method -
Compliance shall be determined based on USEPA Method 10 test data (February 22, 2000 - Gas Power Northwest, Inc) at minimum load yielding:
131 ppmv * 5,027 dscf/min * 28 g/mole/385.1 e6 * 60 min/hr = 2.87 lb/hr

Emission Limitation -
12.7 ton CO/yr

Applicable Compliance Method -
Compliance shall be determined by multiplying the maximum hourly allowable of 26.25 pounds CO times the maximum operating hours:
2.87 lb CO/hr * 8760 hr/yr * 1 ton/2,000 lb = 12.7 ton CO/yr

c. Emission Limitation -
0.28 lb VOC/hr

Applicable Compliance Method -
Compliance shall be determined based on USEPA Method 25a test data (February 22, 2000 - Gas Power Northwest, Inc) at minimum load yielding:
8 ppmv * 5,027 dscf/min * 44 g/mole/385.1 e6 * 60 min/hr = 0.276 lb/hr

Emission Limitation -
1.23 ton VOC/yr

Applicable Compliance Method -
Compliance shall be determined by multiplying the maximum hourly allowable of 2.6 pounds VOC times the maximum operating hours:
0.28 lb VOC/hr * 8760 hr/yr * 1 ton/2,000 lb = 1.23 ton VOC/yr

d. Emission Limitation -
0.31 lb PM/hr

Applicable Compliance Method -
Compliance shall be demonstrated by using the appropriate emission factors from "Compilation of Air Pollutant Emission Factors", Fifth Edition (AP-42) Table 3.1-1, or if required, testing of the exhaust stack, using Methods 1 through 5, found in 40 CFR Part

60, Appendix A:

Pollutant	Emission Factor	Source of Factor
PM w/ natural gas	0.04 lb/MM Btu	OAC rule 3745-17-11

1.2 MMBTU/hr * 0.04 lb PM/MMBTU = 0.28 lb PM/hr;

Emission Limitation -
1.23 ton PM/yr

Applicable Compliance Method -
Compliance shall be determined by multiplying the maximum hourly allowable of 0.31 pounds particulate matter times the maximum operating hours;
0.28 lb PM/hr * 8760 hrs/yr * 1 ton/2,000 lb = 1.23 ton PM/yr; and

e. Emissions Limitation:
Visible particulate emissions from the stack shall not exceed 20% opacity, as a six-minute average.

Applicable Compliance Method:
If required, compliance shall be demonstrated through visible emissions observation performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

F. Miscellaneous Requirements

None

NEW SOURCE REVIEW FORM B

PTI Number: 01-08284 Facility ID: 0125101864

FACILITY NAME American Electric Power

FACILITY DESCRIPTION 1.2 mw gas fired combustion turbine. CITY/TWP Groveport

Emissions Unit ID: **P003**

SIC CODE 8734 SCC CODE 2-02-002-01 EMISSIONS UNIT ID B001

EMISSIONS UNIT DESCRIPTION CSI 145 HP 15.8 MMBTU/hr Natural Gas Fired Compressor NGC 004

DATE INSTALLED 10/2000

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			0.31	1.37
PM_{10}					
Sulfur Dioxide					
Organic Compounds	Attainment			0.64	2.8
Nitrogen Oxides	Attainment			5.27	23.1
Carbon Monoxide	Attainment			5.19	22.75
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination Compliance with allowable limits and applicable rules.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? $

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: _____

3455.wpd

NEW SOURCE REVIEW FORM B

PTI Number: 01-08284 Facility ID: 0125101864

FACILITY NAME American Electric Power

FACILITY DESCRIPTION 1.2 mw gas fired combustion turbine. CITY/TWP Groveport

Emissions Unit ID: **P003**

SIC CODE 8734 SCC CODE 2-04-003-01 EMISSIONS UNIT ID P003

EMISSIONS UNIT DESCRIPTION 1.2 MW Gas-Fired Combustion Turbine 003

DATE INSTALLED 10/2000

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			0.31	1.23
PM_{10}					
Sulfur Dioxide					
Organic Compounds	Attainment			0.28	1.23
Nitrogen Oxides	Attainment			6.3	27.6
Carbon Monoxide	Attainment			2.87	12.7
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination Compliance with allowable emission limits and applicable regulations.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? $

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: 01-08284 Facility ID: 0125101864

FACILITY NAME American Electric Power

FACILITY DESCRIPTION 1.2 mw gas fired combustion turbine. CITY/TWP Groveport

Emissions Unit ID: **P003**

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

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

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

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

NSR Discussion

NEW SOURCE REVIEW DISCUSSION

PTI 01-08284 1.2 MW Innovator Genset gas-fired microturbine with 145 hp gas-fired compressor engine

A. General Information

American Electric Power uses the John Dolan Laboratory for evaluating field equipment. This facility currently has a potential to emit less than 100 tons PM, OC, NOx, SO2 and CO. This gas-fired microturbine is proposed for testing during 30-60 days at either the Dolan Laboratory and the Walnut Station on Bixby Road in Franklin County. AEP intends to test the ability of this microturbine to meet peak demand.

B. **Applicable Rules**

OAC rule 3745-17-11(B)(4): Particulate emissions shall not exceed 0.04 pound per million BTU of actual heat input for gas-fired turbine.

OAC rule 3745-31-05: Gas Power Northwest, Inc. provided test data for the microturbine and Caterpillar for the compressor engine for hourly emission rates for carbon monoxide, nitrogen oxide, and organic compounds. The hourly and annual emission rates are calculated at maximum potential to emit using natural gas as a fuel. No restrictions are proposed for the fuel usage or operating hours.

Emissions Unit ID: **P003**

FACILITY DESCRIPTION 1.2 mw gas fired combustion turbine. CITY/TWP Groveport

OAC rule 3745-17-07(A): Visible particulate emissions shall not exceed 20 % opacity, as a six-minute average, except as provided by rule.

C. Miscellaneous

The initial startup will be delayed until the permit is issued.

D. Fee

The fee is based on the heat input rating of the engine. The 145hp engine has a heat input greater than 10 MMBTU/hr with a fee of $400.00. The 1.2MW genset turbine has a heat input of less than 10 MMBTU/hr with a fee of $200. The $600.00 fee will be assessed.

CALCULATIONS

145 HP Caterpillar Gas-fired Compressor

Caterpillar G3306-NA, Rich burn, natural aspiration factor - 16.5 grams NOx/bhp-hr * 145 bhp * 1 lb/454 gr = 5.27 lb NOX/hr

Caterpillar G3306-NA, Rich burn, natural aspiration factor - 16.25 gr CO/bhp-hr * 145 bhp * 1 lb/454 gr = 5.19 lb CO/hr

Caterpillar G3306-NA, Rich burn, natural aspiration factor - 2.0 gr VOC/bhp-hr * 145 bhp * 1 lb/454 gr = 0.64 lb VOC/hr;

1.2 MW Genset Turbine

Gas Power Northwest, Inc test data - 98 ppmv * 8,948 dscf/min(maximum) * 46 g/mole/385.1 e6 * 60 min/hr = 6.28 lbNOx/hr

Gas Power Northwest, Inc test data - 131 ppmv * 5,027 dscf/min(minimum) * 28 g/mole/385.1 e6 * 60 min/hr = 2.87 lb CO/hr

Gas Power Northwest, Inc test data - 8 ppmv * 5,027 dscf/min(minimum) * 44 g/mole/385.1 e6 * 60 min/hr = 0.276 lbVOC/hr

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

☐ **Synthetic Minor Determination and/or** ☐ **Netting Determination**

Permit To Install ENTER PTI NUMBER HERE

NEW SOURCE REVIEW FORM B

PTI Number: 01-08284 Facility ID: 0125101864

FACILITY NAME American Electric Power

FACILITY DESCRIPTION 1.2 mw gas fired combustion turbine. CITY/TWP Groveport

Emissions Unit ID: **P003**

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:

NONE

Please complete:

SUMMARY (for informational purposes only)

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons Per Year
PM	2.6
NOx	50.7
VOC	4.0
CO	35.45