



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

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

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

**RE: FINAL PERMIT TO INSTALL
LORAIN COUNTY
Application No: 02-13682**

CERTIFIED MAIL

DATE: 4/26/00

	TOXIC REVIEW
	PSD
Y	SYNTHETIC MINOR
	CEMS
	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
Y	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

American Municipal Power - Ohio
Randy Meyer
2600 Airport Rd
Columbus, OH 43219

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

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

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

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

Very truly yours,

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

cc: USEPA

NEDO



Permit To Install

Issue Date: April 26, 2000

Terms and Conditions

Effective Date: April 26, 2000

FINAL PERMIT TO INSTALL 02-13682

Application Number: 02-13682

APS Premise Number: 0247050965

Permit Fee: **\$1200**

Name of Facility: American Municipal Power - Ohio

Person to Contact: Randy Meyer

Address: 2600 Airport Rd
Columbus, OH 43219

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

**2200 S Avon-Belden Rd
Grafton, Ohio**

Description of proposed emissions unit(s):

3-Caterpillar Model 3516B, 2628 HP (17.53 mmBtu/hr) 1825 kWe, diesel-fired engine/generator units.

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

<u>Pollutant</u>	<u>Tons Per Year</u>
NOx	85.83
CO	6.60
TOC	1.92
PM	1.95
SO2	1.59

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Caterpillar Model 3516B 2628BHP (17.53 mmBtu/hr), 1825 kWe, diesel fueled engine/generator (B001).	OAC rule 3745-35-07(D)	Annual NOx emissions for facility--See A.2.a.
	OAC rule 3745-31-05(A)(3)	a. NOx emissions from this emissions unit shall not exceed 47.69 lbs/hr and 28.61 TPY.
		b. CO emissions from this emissions unit shall not exceed 3.67lbs/hr and 2.20 TPY.
		c. Total Organic Compound (TOC) emissions from this emissions unit shall not exceed 1.06 lb/hr and 0.64 TPY.
		d. Particulate emissions from this emissions unit shall not exceed 0.062 lb/mmBtu of actual heat input, 1.09 lbs/hr and 0.65 TPY.
	OAC rule 3745-17-11(B)(5)(a)	e. Sulfur dioxide emissions from this emissions unit shall not exceed 0.050 lb/mmBtu actual heat input, 0.88 lb/hr and 0.53 TPY.
	OAC rule 3745-18-06(G)	Less stringent than OAC rule 3745-31-05 particulate limit above.
		Less stringent than OAC rule 3745-31-05 SO2 limit above.

OAC rule 3745-17-07

Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed twenty (20) percent opacity, as a six-minute average, except for a period of not more than six (6) consecutive minutes in any sixty-minute period.

2. Additional Terms and Conditions

- 2.a** The total annual emissions of NO_x from all emissions units at this facility (B001, B002, and B003) shall be limited to 85.83 tons, as a rolling 12-month summation. This annual facility NO_x emission limitation shall be achieved by restricting both the maximum quantity of diesel fuel burned and the maximum annual hours of operation for these emissions units as indicated in section B.

B. Operational Restrictions

1. The quality of the oil burned in this emissions unit shall meet, on an "as received" basis, a sulfur content which is sufficient to comply with the allowable sulfur dioxide emissions limitation of 0.05 pounds SO₂/mmBtu of actual heat output.
2. The operation of each of the emissions units at this facility (B001, B002, & B003) (i.e., the firing of each of these engines with diesel fuel accompanied by the generation of electricity) shall be limited to no more than 1200 hours per year, based on a rolling, 12-month summation of operating hours.
3. The maximum quantity of diesel fuel which may be burned in each of these emissions units (B001, B002, and B003) shall not exceed 154,080 gallons per year based on a rolling 12-month summation of fuel usage.
4. To ensure enforceability during the first twelve (12) months of operation following startup of these emissions units (B001, B002, & B003), the permittee shall not exceed the diesel fuel usage and operating hours limitations specified in the following table:

American Municipal Power - Ohio
PTI Application: 02-13682
Issued: April 26, 2000

Facility ID: 0247050965
Emissions Unit ID: B001

<u>CALENDAR MONTH(S) FOLLOWING STARTUP</u>	<u>ALLOWABLE CUMULATIVE TOTAL GALLONS OF FUEL BURNED</u>	<u>ALLOWABLE CUMULATIVE TOTAL HOURS OF OPERATION</u>
1	25,680	200
1-2	51,360	400
1-3	77,040	600
1-4	89,880	700
1-5	102,720	800
1-6	115,560	900
1-7	121,980	950
1-8	128,400	1000
1-9	134,820	1050
1-10	141,240	1100
1-11	147,660	1150
1-12	154,080	1200

After the first 12 calendar months of operation following startup of each of these emissions units (B001, B002, & B003), compliance with the annual diesel fuel usage and operating hours limitations shall be based on a rolling, 12-month summation of the operating hours and fuel usage.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information:
 - a. The total volume (in gallons) of low sulfur No. 2 diesel fuel burned in each of these emissions units (B001, B002, & B003); and
 - b. The total hours of operation of each emissions unit (B001, B002, & B003).
2. The permittee shall maintain monthly records of the following information:
 - a. Beginning after the first 12 calendar months of operation following startup of this emissions unit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation following startup, the permittee shall record the cumulative operating hours for each calendar month.

- b. Beginning after the first 12 calendar months of operation following startup of this emissions unit, the rolling, 12-month summation of diesel fuel usage.

Also, during the first 12 calendar months of operation following startup, the permittee shall record the cumulative diesel fuel usage for each calendar month.

3. The permittee shall calculate and record, on a monthly basis, the total emissions of NO_x, CO, SO₂,

PM, and total organic compound emissions for all emissions units (B001, B002, & B003), utilizing methods of calculation specified in section E of these terms and conditions.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of both the rolling, 12-month fuel usage limitation and the rolling, 12-month operating hours restriction and, for the first 12 calendar months of operation following startup of this emissions unit, all exceedances of the maximum allowable cumulative diesel fuel usage and cumulative operating hours limitations. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).
2. The permittee shall submit an annual report which summarizes the following information:
 - a. the monthly and annual volume (in gallons) of low sulfur diesel fuel burned in each emissions unit (B001, B002, & B003);
 - b. the total monthly and annual hours of operation of each emissions unit (B001, B002, & B003); and
 - c. the total annual emissions of NO_x, CO, PM, SO₂, and total organic compounds from all emissions units (B001, B002, & B003) collectively for the previous calendar year.

This reports shall be submitted by January 31 of each year for operations during the previous calendar year.

E. Testing Requirements

1. Emissions Limitation: NO_x emissions from each emissions unit shall not exceed 47.69 lbs/hr and 28.61 TPY; NO_x emissions from this facility (emissions units B001, B002, & B003 collectively) shall not exceed 85.83 TPY.

Applicable Compliance Method: Compliance shall be based on calculations using the rated horsepower of each emissions unit, the hours of operation recorded above, and the manufacturer's emissions factor specified below with the following equation:

$$ER(\text{HOURLY}) = HP \times Ef \times 1/453.6, \text{ and}$$

$$ER(\text{ANNUAL}) = HP \times Ef \times 1/453.6 \times A \times 1/2000.$$

Where:

HP = Rated horsepower of each engine,

Ef = Emissions factor for engine in grams/horsepower-hour (8.23 grams NO_x/HP-HR),

A = Annual hours of engine operation.

Annual emissions for the facility (B001, B002, & B003 collectively) shall simply be the annual emissions for each engine multiplied by three. If required pursuant to OAC rule 3745-15-04, the permittee shall demonstrate compliance with the NO_x emissions limits of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 7 or 7E.

2. Emissions Limitation: Carbon monoxide emissions from each emissions unit shall not exceed 3.67 lbs/hr and 2.20 TPY.

Applicable Compliance Method: Compliance shall be based on calculations utilizing emissions factors specified in U.S. EPA document AP-42, 5th Edition, "Compilation of Air Pollution Emissions Factors", section 3.4, table 3.4-1 (10/96), the maximum rated horsepower (or heat rate) for each engine, and the hours of operation of this emissions unit as recorded above. If required pursuant to OAC rule 3745-15-04, the permittee shall demonstrate compliance with the CO emissions limits of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 10.

3. Emissions Limitation: Total organic compound emissions from each emissions unit shall not exceed 1.06 lbs/hr and 0.64 TPY.

Applicable Compliance Method: Compliance shall be based on calculations utilizing emissions factors specified in U.S. EPA document AP-42, 5th Edition, "Compilation of Air Pollution Emissions Factors", section 3.4, table 3.4-1 (10/96), the maximum rated horsepower (or heat rate) for each engine, and the hours of operation of this emissions unit as recorded above.

4. Emissions Limitation: Particulate emissions from each emissions unit shall not exceed 0.062 lb/mmBtu of actual heat input, 1.09 lbs/hr, and 0.65 TPY.

Applicable Compliance Method: Compliance shall be based on calculations utilizing emissions factors specified in U.S. EPA document AP-42, 5th Edition, "Compilation of Air Pollution Emissions Factors", section 3.4, table 3.4-1 (10/96), the maximum rated horsepower (or heat rate) for each engine, and the hours of operation of this emissions unit as recorded above. If required pursuant to OAC rule 3745-15-04, the permittee shall demonstrate compliance with the particulate emissions limits of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 5, and OAC rule 3745-17-03(B)(7).

5. Emissions Limitation: Sulfur dioxide emissions from each emissions unit shall not exceed 0.050 lb/mmBtu of actual heat input, 0.88 lbs/hr, and 0.53 TPY.

Applicable Compliance Method: Compliance shall be based on calculations utilizing emissions factors specified in U.S. EPA document AP-42, 5th Edition, "Compilation of Air Pollution Emissions Factors", section 3.4, table 3.4-1 (10/96), the maximum rated horsepower (or heat rate) for each engine, and the hours of operation of this emissions unit as recorded above. If required pursuant to OAC rule 3745-15-04, the permittee shall demonstrate compliance with the sulfur dioxide emissions limits of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 6, and in OAC rule 3745-18-04.

6. Emissions Limitation: Visible particulate emissions from the exhaust stack serving each emissions unit shall not exceed twenty (20) percent opacity, as a six-minute average, except for a period of not more than six (6) consecutive minutes in any sixty-minute period.

Applicable Compliance Method: Compliance shall be determined through visible emissions observations in accordance with test procedures specified in 40 CFR Part 60, Method 9, and in OAC rule 3745-17-03(B)(1).

7. Initial Start-up Emissions Testing Requirement:

Within 60 days of initial startup of this emissions unit, the permittee shall conduct, or have conducted, initial performance/emissions compliance testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted prior to the issuance of a Permit to Operate for emissions unit B001, and within 60 days of the initial startup of this diesel engine/electric generation unit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for nitrogen oxides NO_x.
- c. The test method(s) employed to demonstrate compliance with the allowable mass emission rate(s) for NO_x shall be Method 7 (or 7E) 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 test(s) shall be conducted while this emissions unit is operating at peak load or at a designated maximum normal operating load for this diesel engine/generator.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA

Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

The engine operating hours (and fuel usage) necessary to startup, tune, and conduct the required initial emissions compliance testing on this emissions unit shall not count against the annual "operating hours/fuel usage limitations" for this emissions unit as stated in section B.4. above.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Caterpillar Model 3516B 2628BHP (17.53 mmBtu/hr), 1825 kWe, diesel fueled engine/generator (B002).	OAC rule 3745-35-07(D)	Annual NOx emissions for facility--See A.2.a.
	OAC rule 3745-31-05(A)(3)	a. NOx emissions from this emissions unit shall not exceed 47.69 lbs/hr and 28.61 TPY.
		b. CO emissions from this emissions unit shall not exceed 3.67lbs/hr and 2.20 TPY.
		c. Total Organic Compound (TOC) emissions from this emissions unit shall not exceed 1.06 lb/hr and 0.64 TPY.
		d. Particulate emissions from this emissions unit shall not exceed 0.062 lb/mmBtu of actual heat input, 1.09 lbs/hr and 0.65 TPY.
		e. Sulfur dioxide emissions from this emissions unit shall not exceed 0.050 lb/mmBtu actual heat input, 0.88 lb/hr and 0.53 TPY.
	OAC rule 3745-17-11(B)(5)(a)	Less stringent than OAC rule 3745-31-05 particulate limit above.
	OAC rule 3745-18-06(G)	Less stringent than OAC rule 3745-31-05 SO2 limit above.

OAC rule 3745-17-07

Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed twenty (20) percent opacity, as a six-minute average, except for a period of not more than six (6) consecutive minutes in any sixty-minute period.

2. Additional Terms and Conditions

- 2.a** The total annual emissions of NO_x from all emissions units at this facility (B001, B002, and B003) shall be limited to 85.83 tons, as a rolling 12-month summation. This annual facility NO_x emission limitation shall be achieved by restricting both the maximum quantity of diesel fuel burned and the maximum annual hours of operation for these emissions units as indicated in section B.

B. Operational Restrictions

1. The quality of the oil burned in this emissions unit shall meet, on an “as received” basis, a sulfur content which is sufficient to comply with the allowable sulfur dioxide emissions limitation of 0.05 pounds SO₂/mmBtu of actual heat output.
2. The operation of each of the emissions units at this facility (B001, B002, & B003) (i.e., the firing of each of these engines with diesel fuel accompanied by the generation of electricity) shall be limited to no more than 1200 hours per year, based on a rolling, 12-month summation of operating hours.
3. The maximum quantity of diesel fuel which may be burned in each of these emissions units (B001, B002, and B003) shall not exceed 154,080 gallons per year based on a rolling 12-month summation of fuel usage.
4. To ensure enforceability during the first twelve (12) months of operation following startup of these emissions units (B001, B002, & B003), the permittee shall not exceed the diesel fuel usage and operating hours limitations specified in the following table:

American Municipal Power - Ohio
PTI Application: 02-13682
Issued: April 26, 2000

Facility ID: 0247050965
Emissions Unit ID: B002

<u>CALENDAR MONTH(S) FOLLOWING STARTUP</u>	<u>ALLOWABLE CUMULATIVE TOTAL GALLONS OF FUEL BURNED</u>	<u>ALLOWABLE CUMULATIVE TOTAL HOURS OF OPERATION</u>
1	25,680	200
1-2	51,360	400
1-3	77,040	600
1-4	89,880	700
1-5	102,720	800
1-6	115,560	900
1-7	121,980	950
1-8	128,400	1000
1-9	134,820	1050
1-10	141,240	1100
1-11	147,660	1150
1-12	154,080	1200

After the first 12 calendar months of operation following startup of each of these emissions units (B001, B002, & B003), compliance with the annual diesel fuel usage and operating hours limitations shall be based on a rolling, 12-month summation of the operating hours and fuel usage.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information:
 - a. The total volume (in gallons) of low sulfur No. 2 diesel fuel burned in each of these emissions units (B001, B002, & B003); and
 - b. The total hours of operation of each emissions unit (B001, B002, & B003).
2. The permittee shall maintain monthly records of the following information:
 - a. Beginning after the first 12 calendar months of operation following startup of this emissions unit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation following startup, the permittee shall record the cumulative operating hours for each calendar month.

- b. Beginning after the first 12 calendar months of operation following startup of this emissions unit, the rolling, 12-month summation of diesel fuel usage.

Also, during the first 12 calendar months of operation following startup, the permittee shall record the cumulative diesel fuel usage for each calendar month.

3. The permittee shall calculate and record, on a monthly basis, the total emissions of NO_x, CO, SO₂,

PM, and total organic compound emissions for all emissions units (B001, B002, & B003), utilizing methods of calculation specified in section E of these terms and conditions.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of both the rolling, 12-month fuel usage limitation and the rolling, 12-month operating hours restriction and, for the first 12 calendar months of operation following startup of this emissions unit, all exceedances of the maximum allowable cumulative diesel fuel usage and cumulative operating hours limitations. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).
2. The permittee shall submit an annual report which summarizes the following information:
 - a. the monthly and annual volume (in gallons) of low sulfur diesel fuel burned in each emissions unit (B001, B002, & B003);
 - b. the total monthly and annual hours of operation of each emissions unit (B001, B002, & B003); and
 - c. the total annual emissions of NO_x, CO, PM, SO₂, and total organic compounds from all emissions units (B001, B002, & B003) collectively for the previous calendar year.

This reports shall be submitted by January 31 of each year for operations during the previous calendar year.

E. Testing Requirements

1. Emissions Limitation: NO_x emissions from each emissions unit shall not exceed 47.69 lbs/hr and 28.61 TPY; NO_x emissions from this facility (emissions units B001, B002, & B003 collectively) shall not exceed 85.83 TPY.

Applicable Compliance Method: Compliance shall be based on calculations using the rated horsepower of each emissions unit, the hours of operation recorded above, and the manufacturer's emissions factor specified below with the following equation:

$$ER(\text{HOURLY}) = HP \times Ef \times 1/453.6, \text{ and}$$

$$ER(\text{ANNUAL}) = HP \times Ef \times 1/453.6 \times A \times 1/2000.$$

Where:

HP = Rated horsepower of each engine,

Ef = Emissions factor for engine in grams/horsepower-hour (8.23 grams NO_x/HP-HR),

A = Annual hours of engine operation.

Annual emissions for the facility (B001, B002, & B003 collectively) shall simply be the annual emissions for each engine multiplied by three. If required pursuant to OAC rule 3745-15-04, the permittee shall demonstrate compliance with the NO_x emissions limits of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 7 or 7E.

2. Emissions Limitation: Carbon monoxide emissions from each emissions unit shall not exceed 3.67 lbs/hr and 2.20 TPY.

Applicable Compliance Method: Compliance shall be based on calculations utilizing emissions factors specified in U.S. EPA document AP-42, 5th Edition, "Compilation of Air Pollution Emissions Factors", section 3.4, table 3.4-1 (10/96), the maximum rated horsepower (or heat rate) for each engine, and the hours of operation of this emissions unit as recorded above. If required pursuant to OAC rule 3745-15-04, the permittee shall demonstrate compliance with the CO emissions limits of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 10.

3. Emissions Limitation: Total organic compound emissions from each emissions unit shall not exceed 1.06 lbs/hr and 0.64 TPY.

Applicable Compliance Method: Compliance shall be based on calculations utilizing emissions factors specified in U.S. EPA document AP-42, 5th Edition, "Compilation of Air Pollution Emissions Factors", section 3.4, table 3.4-1 (10/96), the maximum rated horsepower (or heat rate) for each engine, and the hours of operation of this emissions unit as recorded above.

4. Emissions Limitation: Particulate emissions from each emissions unit shall not exceed 0.062 lb/mmBtu of actual heat input, 1.09 lbs/hr, and 0.65 TPY.

Applicable Compliance Method: Compliance shall be based on calculations utilizing emissions factors specified in U.S. EPA document AP-42, 5th Edition, "Compilation of Air Pollution Emissions Factors", section 3.4, table 3.4-1 (10/96), the maximum rated horsepower (or heat rate) for each engine, and the hours of operation of this emissions unit as recorded above. If required pursuant to OAC rule 3745-15-04, the permittee shall demonstrate compliance with the particulate emissions limits of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 5, and OAC rule 3745-17-03(B)(7).

5. Emissions Limitation: Sulfur dioxide emissions from each emissions unit shall not exceed 0.050 lb/mmBtu of actual heat input, 0.88 lbs/hr, and 0.53 TPY.

Applicable Compliance Method: Compliance shall be based on calculations utilizing emissions factors specified in U.S. EPA document AP-42, 5th Edition, "Compilation of Air Pollution Emissions Factors", section 3.4, table 3.4-1 (10/96), the maximum rated horsepower (or heat rate) for each engine, and the hours of operation of this emissions unit as recorded above. If required pursuant to OAC rule 3745-15-04, the permittee shall demonstrate compliance with the sulfur dioxide emissions limits of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 6, and in OAC rule 3745-18-04.

6. Emissions Limitation: Visible particulate emissions from the exhaust stack serving each emissions unit shall not exceed twenty (20) percent opacity, as a six-minute average, except for a period of not more than six (6) consecutive minutes in any sixty-minute period.

Applicable Compliance Method: Compliance shall be determined through visible emissions observations in accordance with test procedures specified in 40 CFR Part 60, Method 9, and in OAC rule 3745-17-03(B)(1).

7. Initial Start-up Emissions Testing Requirement:

Within 60 days of initial startup of this emissions unit, the permittee shall conduct, or have conducted, initial performance/emissions compliance testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted prior to the issuance of a Permit to Operate for emissions unit B002, and within 60 days of the initial startup of this diesel engine/electric generation unit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for nitrogen oxides NO_x.
- c. The test method(s) employed to demonstrate compliance with the allowable mass emission rate(s) for NO_x shall be Method 7 (or 7E) 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 test(s) shall be conducted while this emissions unit is operating at peak load or at a designated maximum normal operating load for this diesel engine/generator.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA

Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

The engine operating hours (and fuel usage) necessary to startup, tune, and conduct the required initial emissions compliance testing on this emissions unit shall not count against the annual "operating hours/fuel usage limitations" for this emissions unit as stated in section B.4. above.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Caterpillar Model 3516B 2628BHP (17.53 mmBtu/hr), 1825 kWe, diesel fueled engine/generator (B003).	OAC rule 3745-35-07(D)	Annual NOx emissions for facility--See A.2.a.
	OAC rule 3745-31-05(A)(3)	a. NOx emissions from this emissions unit shall not exceed 47.69 lbs/hr and 28.61 TPY.
		b. CO emissions from this emissions unit shall not exceed 3.67lbs/hr and 2.20 TPY.
		c. Total Organic Compound (TOC) emissions from this emissions unit shall not exceed 1.06 lb/hr and 0.64 TPY.
		d. Particulate emissions from this emissions unit shall not exceed 0.062 lb/mmBtu of actual heat input, 1.09 lbs/hr and 0.65 TPY.
	OAC rule 3745-17-11(B)(5)(a)	e. Sulfur dioxide emissions from this emissions unit shall not exceed 0.050 lb/mmBtu actual heat input, 0.88 lb/hr and 0.53 TPY.
	OAC rule 3745-18-06(G)	Less stringent than OAC rule 3745-31-05 particulate limit above.
		Less stringent than OAC rule 3745-31-05 SO2 limit above.

OAC rule 3745-17-07

Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed twenty (20) percent opacity, as a six-minute average, except for a period of not more than six (6) consecutive minutes in any sixty-minute period.

2. Additional Terms and Conditions

2.a The total annual emissions of NO_x from all emissions units at this facility (B001, B002, and B003) shall be limited to 85.83 tons, as a rolling 12-month summation. This annual facility NO_x emission limitation shall be achieved by restricting both the maximum quantity of diesel fuel burned and the maximum annual hours of operation for these emissions units as indicated in section B.

B. Operational Restrictions

1. The quality of the oil burned in this emissions unit shall meet, on an “as received” basis, a sulfur content which is sufficient to comply with the allowable sulfur dioxide emissions limitation of 0.05 pounds SO₂/mmBtu of actual heat output.
2. The operation of each of the emissions units at this facility (B001, B002, & B003) (i.e., the firing of each of these engines with diesel fuel accompanied by the generation of electricity) shall be limited to no more than 1200 hours per year, based on a rolling, 12-month summation of operating hours.
3. The maximum quantity of diesel fuel which may be burned in each of these emissions units (B001, B002, and B003) shall not exceed 154,080 gallons per year based on a rolling 12-month summation of fuel usage.
4. To ensure enforceability during the first twelve (12) months of operation following startup of these emissions units (B001, B002, & B003), the permittee shall not exceed the diesel fuel usage and operating hours limitations specified in the following table:

American Municipal Power - Ohio
PTI Application: 02-13682
Issued: April 26, 2000

Facility ID: 0247050965
Emissions Unit ID: B003

<u>CALENDAR MONTH(S) FOLLOWING STARTUP</u>	<u>ALLOWABLE CUMULATIVE TOTAL GALLONS OF FUEL BURNED</u>	<u>ALLOWABLE CUMULATIVE TOTAL HOURS OF OPERATION</u>
1	25,680	200
1-2	51,360	400
1-3	77,040	600
1-4	89,880	700
1-5	102,720	800
1-6	115,560	900
1-7	121,980	950
1-8	128,400	1000
1-9	134,820	1050
1-10	141,240	1100
1-11	147,660	1150
1-12	154,080	1200

After the first 12 calendar months of operation following startup of each of these emissions units (B001, B002, & B003), compliance with the annual diesel fuel usage and operating hours limitations shall be based on a rolling, 12-month summation of the operating hours and fuel usage.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information:
 - a. The total volume (in gallons) of low sulfur No. 2 diesel fuel burned in each of these emissions units (B001, B002, & B003); and
 - b. The total hours of operation of each emissions unit (B001, B002, & B003).
2. The permittee shall maintain monthly records of the following information:
 - a. Beginning after the first 12 calendar months of operation following startup of this emissions unit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation following startup, the permittee shall record the cumulative operating hours for each calendar month.

- b. Beginning after the first 12 calendar months of operation following startup of this emissions unit, the rolling, 12-month summation of diesel fuel usage.

Also, during the first 12 calendar months of operation following startup, the permittee shall record the cumulative diesel fuel usage for each calendar month.

3. The permittee shall calculate and record, on a monthly basis, the total emissions of NO_x, CO, SO₂,

PM, and total organic compound emissions for all emissions units (B001, B002, & B003), utilizing methods of calculation specified in section E of these terms and conditions.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of both the rolling, 12-month fuel usage limitation and the rolling, 12-month operating hours restriction and, for the first 12 calendar months of operation following startup of this emissions unit, all exceedances of the maximum allowable cumulative diesel fuel usage and cumulative operating hours limitations. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).
2. The permittee shall submit an annual report which summarizes the following information:
 - a. the monthly and annual volume (in gallons) of low sulfur diesel fuel burned in each emissions unit (B001, B002, & B003);
 - b. the total monthly and annual hours of operation of each emissions unit (B001, B002, & B003); and
 - c. the total annual emissions of NO_x, CO, PM, SO₂, and total organic compounds from all emissions units (B001, B002, & B003) collectively for the previous calendar year.

This reports shall be submitted by January 31 of each year for operations during the previous calendar year.

E. Testing Requirements

1. Emissions Limitation: NO_x emissions from each emissions unit shall not exceed 47.69 lbs/hr and 28.61 TPY; NO_x emissions from this facility (emissions units B001, B002, & B003 collectively) shall not exceed 85.83 TPY.

Applicable Compliance Method: Compliance shall be based on calculations using the rated horsepower of each emissions unit, the hours of operation recorded above, and the manufacturer's emissions factor specified below with the following equation:

$$ER(\text{HOURLY}) = HP \times Ef \times 1/453.6, \text{ and}$$

$$ER(\text{ANNUAL}) = HP \times Ef \times 1/453.6 \times A \times 1/2000.$$

Where:

HP = Rated horsepower of each engine,

Ef = Emissions factor for engine in grams/horsepower-hour (8.23 grams NO_x/HP-HR),

A = Annual hours of engine operation.

Annual emissions for the facility (B001, B002, & B003 collectively) shall simply be the annual emissions for each engine multiplied by three. If required pursuant to OAC rule 3745-15-04, the permittee shall demonstrate compliance with the NO_x emissions limits of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 7 or 7E.

2. Emissions Limitation: Carbon monoxide emissions from each emissions unit shall not exceed 3.67 lbs/hr and 2.20 TPY.

Applicable Compliance Method: Compliance shall be based on calculations utilizing emissions factors specified in U.S. EPA document AP-42, 5th Edition, "Compilation of Air Pollution Emissions Factors", section 3.4, table 3.4-1 (10/96), the maximum rated horsepower (or heat rate) for each engine, and the hours of operation of this emissions unit as recorded above. If required pursuant to OAC rule 3745-15-04, the permittee shall demonstrate compliance with the CO emissions limits of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 10.

3. Emissions Limitation: Total organic compound emissions from each emissions unit shall not exceed 1.06 lbs/hr and 0.64 TPY.

Applicable Compliance Method: Compliance shall be based on calculations utilizing emissions factors specified in U.S. EPA document AP-42, 5th Edition, "Compilation of Air Pollution Emissions Factors", section 3.4, table 3.4-1 (10/96), the maximum rated horsepower (or heat rate) for each engine, and the hours of operation of this emissions unit as recorded above.

4. Emissions Limitation: Particulate emissions from each emissions unit shall not exceed 0.062 lb/mmBtu of actual heat input, 1.09 lbs/hr, and 0.65 TPY.

Applicable Compliance Method: Compliance shall be based on calculations utilizing emissions factors specified in U.S. EPA document AP-42, 5th Edition, "Compilation of Air Pollution Emissions Factors", section 3.4, table 3.4-1 (10/96), the maximum rated horsepower (or heat rate) for each engine, and the hours of operation of this emissions unit as recorded above. If required pursuant to OAC rule 3745-15-04, the permittee shall demonstrate compliance with the particulate emissions limits of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 5, and OAC rule 3745-17-03(B)(7).

5. Emissions Limitation: Sulfur dioxide emissions from each emissions unit shall not exceed 0.050 lb/mmBtu of actual heat input, 0.88 lbs/hr, and 0.53 TPY.

Applicable Compliance Method: Compliance shall be based on calculations utilizing emissions factors specified in U.S. EPA document AP-42, 5th Edition, "Compilation of Air Pollution Emissions Factors", section 3.4, table 3.4-1 (10/96), the maximum rated horsepower (or heat rate) for each engine, and the hours of operation of this emissions unit as recorded above. If required pursuant to OAC rule 3745-15-04, the permittee shall demonstrate compliance with the sulfur dioxide emissions limits of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 6, and in OAC rule 3745-18-04.

6. Emissions Limitation: Visible particulate emissions from the exhaust stack serving each emissions unit shall not exceed twenty (20) percent opacity, as a six-minute average, except for a period of not more than six (6) consecutive minutes in any sixty-minute period.

Applicable Compliance Method: Compliance shall be determined through visible emissions observations in accordance with test procedures specified in 40 CFR Part 60, Method 9, and in OAC rule 3745-17-03(B)(1).

7. Initial Start-up Emissions Testing Requirement:

Within 60 days of initial startup of this emissions unit, the permittee shall conduct, or have conducted, initial performance/emissions compliance testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted prior to the issuance of a Permit to Operate for emissions unit B003, and within 60 days of the initial startup of this diesel engine/electric generation unit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for nitrogen oxides NO_x.
- c. The test method(s) employed to demonstrate compliance with the allowable mass emission rate(s) for NO_x shall be Method 7 (or 7E) 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 test(s) shall be conducted while this emissions unit is operating at peak load or at a designated maximum normal operating load for this diesel engine/generator.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA

Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

The engine operating hours (and fuel usage) necessary to startup, tune, and conduct the required initial emissions compliance testing on this emissions unit shall not count against the annual "operating hours/fuel usage limitations" for this emissions unit as stated in section B.4. above.

F. Miscellaneous Requirements

None.

NEW SOURCE REVIEW FORM B

PTI Number: 02-13682

Facility ID: 0247050965

FACILITY NAME American Municipal Power - Ohio

FACILITY DESCRIPTION 3-Caterpillar Model 3516B, 2628 HP (17.53 mmBtu/hr), 1825 kWe, Diesel-fired Engine/Generator units CITY/TWP Grafton

SIC CODE 4911 SCC CODE 20200401 EMISSIONS UNIT ID B001

EMISSIONS UNIT DESCRIPTION Caterpillar Model 3516B, 2628 HP (17.53 mmBtu/hr), 1825 kWe, diesel-fired engine/generator (Unit #1)

DATE INSTALLED 04/2000

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	0.72 lb/hr	0.43	1.09 lbs/hr	0.65
PM ₁₀					
Sulfur Dioxide	Attainment	0.88 lb/hr	0.53	0.88 lb/hr	0.53
Organic Compounds	Attainment	1.06 lbs/hr	0.64	1.06 lbs/hr	0.64
Nitrogen Oxides	Attainment	47.69 lbs/hr	28.61	47.69 lbs/hr	28.61
Carbon Monoxide	Attainment	3.67 lbs/hr	2.20	3.67 lbs/hr	2.20
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?

BAT=Use of Caterpillar Low NOx Combustion Control Module (for reduction of NOx emissions) and use of low sulfur (less than 0.05% by weight) diesel fuel in engine.

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: **Note: PSD modeling performed by applicant for NOx; data on file at NEDO shows compliance with OEPA air modeling policy.

NEW SOURCE REVIEW FORM B

PTI Number: 02-13682

Facility ID: 0247050965

FACILITY NAME American Municipal Power - Ohio

FACILITY DESCRIPTION 3-Caterpillar Model 3516B, 2628 HP (17.53 mmBtu/hr), 1825 kWe, Diesel-fired Engine/Generator units CITY/TWP Grafton

SIC CODE 4911 SCC CODE 20200401 EMISSIONS UNIT ID B002

EMISSIONS UNIT DESCRIPTION Caterpillar Model 3516B, 2628 HP (17.53 mmBtu/hr), 1825 kWe, diesel-fired engine/generator (Unit #2)

DATE INSTALLED 04/2000

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	0.72 lb/hr	0.43	1.09 lbs/hr	0.65
PM ₁₀					
Sulfur Dioxide	Attainment	0.88 lb/hr	0.53	0.88 lb/hr	0.53
Organic Compounds	Attainment	1.06 lbs/hr	0.64	1.06 lbs/hr	0.64
Nitrogen Oxides	Attainment	47.69 lbs/hr	28.61	47.69 lbs/hr	28.61
Carbon Monoxide	Attainment	3.67 lbs/hr	2.20	3.67 lbs/hr	2.20
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?

BAT=Use of Caterpillar Low NOx Combustion Control Module (for reduction of NOx emissions) and use of low sulfur (less than 0.05% by weight) diesel fuel in engine.

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: **Note: PSD modeling performed by applicant for NOx; data on file at NEDO shows compliance with OEPA air modeling policy.

NEW SOURCE REVIEW FORM B

PTI Number: 02-13682

Facility ID: 0247050965

FACILITY NAME American Municipal Power - Ohio

FACILITY DESCRIPTION 3-Caterpillar Model 3516B, 2628 HP (17.53 mmBtu/hr), 1825 kWe, Diesel-fired Engine/Generator units

CITY/TWP Grafton

SIC CODE 4911 SCC CODE 20200401 EMISSIONS UNIT ID B003

EMISSIONS UNIT DESCRIPTION Caterpillar Model 3516B, 2628 HP (17.53 mmBtu/hr), 1825 kWe, diesel-fired engine/generator (Unit #3).

DATE INSTALLED 04/2000

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	0.72 lb/hr	0.43	1.09 lb/hr	0.65
PM ₁₀					
Sulfur Dioxide	Attainment	0.88 lb/hr	0.53	0.88 lb/hr	0.53
Organic Compounds	Attainment	1.06 lbs/hr	0.64	1.06 lbs/hr	0.64
Nitrogen Oxides	Attainment	47.69 lbs/hr	28.61	47.69 lbs/hr	28.61
Carbon Monoxide	Attainment	3.67 lbs/hr	2.20	3.67 lbs/hr	2.20
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?

BAT=Use of Caterpillar Low NOx Combustion Control Module (for reduction of NOx emissions) and use of low sulfur (less than 0.05% by weight) diesel fuel in engine.

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:

**Note: PSD modeling performed by applicant for NOx; data on file at NEDO shows compliance with OEPA air modeling policy.

NEW SOURCE REVIEW FORM B

PTI Number: 02-13682

Facility ID: 0247050965

FACILITY NAME American Municipal Power - Ohio

FACILITY DESCRIPTION	3-Caterpillar Model 3516B, 2628 HP (17.53 mmBtu/hr), 1825 kWe, Diesel-fired Engine/Generator units	CITY/TWP	Grafton
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Please describe any hard copy information is being submitted with this recommendation (Please send hard copy information to Pam McGraner, DAPC Central Office - Air Quality Modeling and Planning):

Hardcopy information submitted to Central Office/NSR relative to this PTI recommendation included (1) PTI emissions calculations, (2) copy of the permittee’s calculate actual/proposed maximum emissions rates, (3) control equipment cost data, (4) schematic diagrams of emissions units and exhaust gas/stack parameters, and (5) copies of emissions diffusion modeling data provided by the permittee relative to compliance with the OEPA air quality modeling policy.

Please provide any additional permit specific notes as you deem necessary:

NONE

Permit To Install Synthetic Minor Write-Up

SYNTHETIC MINOR DETERMINATION–PTI #02-13682

A)SOURCE DESCRIPTION:

American Municipal Power–Ohio proposes to install three Caterpillar Model 3516B, 2628 HP (17.53 mmBtu/hr), 1825 kWe, diesel-fired engine/generator units at a new facility, designated as “AMP-Ohio Grafton Distributed Generation Station”, to be located at 2200 S. Avon Belden Road (SR 83), Grafton, Ohio. These emissions units will be used primarily for emergency power generation during high (peak) system demand.

B)FACILITY EMISSIONS AND AREA ATTAINMENT STATUS:

This new facility–AMP-Ohio Grafton Distributed Generation Station--is located in central Lorain County and will be a significant source of NOx in this area; emissions of CO, total hydrocarbons, particulate matter, and SO2 will be minor. This area is currently attainment for criteria pollutants but may return to non-attainment for ozone.

C)NEW SOURCE EMISSIONS:

Nitrogen Oxides emissions from either of the three emissions units proposed for this facility have the potential to exceed the major source threshold of 100 TPY which would subject this electrical generating station to Title V permitting requirements. The PTE of NOx from each engine/generator, operating unrestricted, would be 208.9 TPY; PTE of NOx from the entire facility would be 626.7 TPY. Potential emissions of all other pollutants from these emissions units would be less than 17 TPY each.

D)CONTEMPORANEOUS EMISSIONS MODIFICATIONS AND CONTROLS:

AMP-Ohio has requested, and we are proposing, facility wide operating restrictions which would limit NOx emissions to a level below the major source threshold of 100 TPY in order to avoid both Title V and PSD permitting requirements. The proposed operating restrictions will be applied to each engine/generator set and will consist of

NEW SOURCE REVIEW FORM B

PTI Number: 02-13682

Facility ID: 0247050965

FACILITY NAME American Municipal Power - Ohio

FACILITY DESCRIPTION	3-Caterpillar Model 3516B, 2628 HP (17.53 mmBtu/hr), 1825 kWe, Diesel-fired Engine/Generator units	CITY/TWP	Grafton
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limiting each diesel-fired engine to burning no more than 154,080 gallons of low sulfur diesel fuel per year and operating no more than 1200 hours per year, both limits on a rolling 12-month summation basis. By restricting these emissions units in such a fashion, total annual NOx emissions from each engine will be limited to 28.61 tons; total annual NOx emissions from the facility will be limited to 85.83 tons. These restrictions will be made federally enforceable and will be monitored through stringent record keeping and reporting requirements.

E)CONCLUSIONS:

NEDO believes that the fuel burning and operating hours restrictions placed on each emissions unit will effectively limit this new facility to synthetic minor status with regards to NOx emissions; the facility is a minor source for other air pollutants.

Please fill in the following for this permit:

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
NOx	85.83
CO	6.60
TOC	1.92
PM	1.95
SO2	1.59