

ADDITIONAL SPECIAL TERMS and CONDITIONS
PTI NO. 02-11948

INTRODUCTION:

The emissions units covered by this permit consist of five (5) small, natural gas-fired engines driving small generators which are utilized for facility power supply. These emissions units are existing sources which need permits since the facility owner, East Ohio Gas Company, does not wish to limit their potential operating hours as required for exemption under OAC 3745-31-03. These engines were installed between 1974 and 1988; collectively, these five engines have the potential to emit a maximum of 84.7 TPY of NO_x with no one engine emitting more than 21.6 TPY.

EMISSIONS LIMITATIONS:

1. Per OAC rule 3745-31-05, the allowable emissions of specific criteria air pollutants shall not exceed the following hourly and annual values:

Pollutant Emitted: -----		NOx	Carbon Monoxide	Total Organic Compounds	Particulate Matter
B001	lbs/hr TPY	4.93 21.6	2.82 12.4	0.39 1.73	0.29 1.26
B002	lbs/hr TPY	3.36 14.7	2.05 8.97	0.28 1.25	0.21 0.91
B003	lbs/hr TPY	3.36 14.7	2.05 8.97	0.28 1.25	0.21 0.91
B004	lbs/hr TPY	3.36 14.7	2.05 8.97	0.28 1.25	0.21 0.91
B005	lbs/hr TPY	4.33 18.97	2.84 12.46	0.40 1.73	0.29 1.26

* ER = Emissions Rate.

OPERATIONAL RESTRICTIONS:

1. The permittee shall use only natural gas as a fuel in each of the emissions units covered by this permit.

MONITORING AND/OR RECORDKEEPING REQUIREMENTS:

1. The permittee shall maintain, on a monthly and annual basis, a record of the

hours of operation of each of the emissions units covered by this permit.

REPORTING REQUIREMENTS:

None.

TESTING REQUIREMENTS:

1. Compliance with the emission limitations detailed above in these terms and conditions shall be determined in accordance with the following methods:
 - a. Emissions Limitation--NOx emissions from each of the emissions units covered by this permit shall not exceed the values listed below:
 - i. B001 -- 4.93 lbs/hr and 21.6 TPY,
 - ii. B002 -- 3.36 lbs/hr and 14.7 TPY,
 - iii. B003 -- 3.36 lbs/hr and 14.7 TPY,
 - iv. B004 -- 3.36 lbs/hr and 14.7 TPY, and
 - v. B005 -- 4.33 lbs/hr and 18.97 TPY.

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

$$ER_{\text{HOURLY}} = \text{HP} \times \text{Ef} \times 1/453.6, \text{ and}$$

$$ER_{\text{ANNUAL}} = \text{HP} \times \text{Ef} \times 1/453.6 \times A \times 1/2000$$

where; HP = Rated horsepower of engine,

 Ef = Emissions factor for engine in grams per
horsepower-hour,

 A = Annual hours of engine operation.

Emissions Factors for each emissions unit are as follows:

- i. B001 = 15.0 grams per horsepower-hour,
 - ii. B002, B003, and B004 = 14.1 grams per horsepower-hour (each),
- and
- iii. B005 = 13.1 grams per horsepower-hour.

If required pursuant to OAC 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.

- b. Emissions Limitation: Carbon monoxide emissions from each of the emissions units covered by this permit shall not exceed the values listed below:

- i. B001 -- 2.82 lbs/hr and 12.4 TPY,
- ii. B002 -- 2.05 lbs/hr and 8.97 TPY,
- iii. B003 -- 2.05 lbs/hr and 8.97 TPY,
- iv. B004 -- 2.05 lbs/hr and 8.97 TPY, and
- v. B005 -- 2.84 lbs/hr and 12.5 TPY.

Applicable Compliance Method: Compliance shall be based on the use of AP-42 emissions factors, Section 3.2, the maximum rated heat rate of each emissions unit, and the hours of operation as recorded above. If required pursuant to OAC 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.

- c. Emissions Limitation--Particulate emissions from each of the emissions units covered by this permit shall not exceed the values listed below:

- i. B001 -- 0.29 lbs/hr and 1.26 TPY,
- ii. B002 -- 0.21 lbs/hr and 0.91 TPY,
- iii. B003 -- 0.21 lbs/hr and 0.91 TPY,
- iv. B004 -- 0.21 lbs/hr and 0.91 TPY, and
- v. B005 -- 0.29 lbs/hr and 1.26 TPY.

Applicable Compliance Method: Compliance shall be based upon the use of an emission factor as specified in AP-42, 5th Edition, Compilation of Air Pollution Emission Factors, section 3.2, table 3.2-5 (.007 lb of particulate matter per mmBtu actual heat input), the maximum rated heat rate of this emissions unit, and the hours of operation of this emissions unit as recorded above. If required pursuant to OAC 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 in OAC 3745-17-03(B)(7).

d. Emissions Limitation--Total organic compound emissions from each of the emissions units covered by this permit shall not exceed the values listed below:

- i. B001 -- 0.39 lbs/hr and 1.73 TPY,
- ii. B002 -- 0.28 lbs/hr and 1.25 TPY,
- iii. B003 -- 0.28 lbs/hr and 1.25 TPY,
- iv. B004 -- 0.28 lbs/hr and 1.25 TPY, and
- v. B005 -- 0.40 lbs/hr and 1.73 TPY.

Applicable Compliance Method: Compliance shall be based on the use of AP-42 emissions factors, Section 3.2, the maximum rated heat rate of each emissions unit, and the hours of operation as recorded above.

MISCELLANEOUS REQUIREMENTS:

None.