



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION  
CUYAHOGA COUNTY**

**CERTIFIED MAIL**

Street Address:

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

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Lazarus Gov.  
Center

**Application No: 13-03400**

**DATE: 6/10/2003**

MM Cuyahoga Energy LLC  
Trond Aschehoug  
3013 Douglas Blvd, Suite 170  
Roseville, CA 95661

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

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,

Michael W. Ahern, Supervisor  
Field Operations and Permit Section  
Division of Air Pollution Control

CC: USEPA

CLAA



**Permit To Install  
Terms and Conditions**

**Issue Date: 6/10/2003  
Effective Date: 6/10/2003**

**FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 13-03400**

Application Number: 13-03400  
APS Premise Number: 1318538151  
Permit Fee: \$0  
Name of Facility: MM Cuyahoga Energy LLC  
Person to Contact: Trond Aschehoug  
Address: 3013 Douglas Blvd, Suite 170  
Roseville, CA 95661

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**6640 Cochran Road  
Solon, Ohio**

Description of proposed emissions unit(s):  
**Four 9.06 MM BTU/Hr internal combustion reciprocating type engines combusting landfill gas only.**

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification 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 source(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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. State and Federally Enforceable Permit To Install General Terms and Conditions

#### 1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - i. The date, place (as defined in the permit), and time of sampling or measurements.
  - ii. The date(s) analyses were performed.
  - iii. The company or entity that performed the analyses.
  - iv. The analytical techniques or methods used.
  - v. The results of such analyses.
  - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
  - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous

calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

## 2. Scheduled Maintenance/Malfunction Reporting

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

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

## 3. Risk Management Plans

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

## 4. Title IV Provisions

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

## 5. Severability Clause

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

declared invalid.

## 6. General Requirements

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

## 7. Fees

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

## 8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are

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

## 9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

**10. Permit To Operate Application**

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

**11. Best Available Technology**

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

**12. 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.

## **B. State Only Enforceable Permit To Install General Terms and Conditions**

### **1. Compliance Requirements**

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

### **2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

### **3. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

### **4. 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.

#### **5. 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 cannot meet the requirements of this permit 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 cannot meet the requirements of this permit or cannot meet applicable standards.

#### **6. 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.

#### **7. Applicability**

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

#### 8. 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.

#### 9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

#### C. Permit To Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
SO <sub>2</sub>	26.44
NO <sub>x</sub>	51.84
CO	146.12
NMOC	15.24
PE	10.4
Fugitive PE	0.68

**Part II - FACILITY SPECIFIC TERMS AND CONDITIONS****A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions****1. Emission Limitations:**

In accordance with OAC rule 3745-31-05(A)(3), the combined annual emissions from emissions units P001 through P004 shall not exceed the following:

- a. Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 26.44 tons per year.
- b. Nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 51.84 tons per year.
- c. Carbon monoxide (CO) emissions shall not exceed 146.12 tons per year.
- d. Non-methane organic compounds (NMOC) emissions shall not exceed 15.24 tons per year.
- e. Particulate emissions (PE) shall not exceed 10.40 tons per year.
- f. Compliance with the combined annual emission limitations for emissions units P001 through P004 (specified above) shall be assumed provided compliance is maintained with the pound per hour emission limitations for SO<sub>2</sub>, NO<sub>x</sub>, CO, NMOC, and PE specified in the terms and conditions for emissions units P001 through P004. The combined annual emission limitations were established in PTI #13-3400 as the summation of the individual annual emission limitations for SO<sub>2</sub>, NO<sub>x</sub>, CO, NMOC, and PE as specified in the terms and conditions for emissions units P001 through P004. Each annual emission limitation for emissions units P001 through P004 was established by multiplying the pounds per hour emission limitation for SO<sub>2</sub>, NO<sub>x</sub>, CO, and NMOC by 8760 hrs/yr and dividing by 2000 lbs/ton. The annual emission limitation for PE was established by multiplying the pound per MMBtu emission limitation by the emissions unit's maximum rated heat input capacity (9.59 MMBtu/hr) by 8760 hrs/yr and dividing by 2000 lbs/ton.

**2. Operational Restrictions:**

The permittee shall operate the internal combustion engine(s) (emissions units P001 through P004) at all times when the landfill gas is routed to the internal combustion engine(s).

- a. The total heating value of the landfill gas burned in emissions units P001 through P004, combined, shall not exceed 38.36 MMBTU/hr.
- b. Emissions units P001 through P004 shall be designed and operated in such a manner that the requirements of OAC rule 3745-76 for municipal solid waste landfill controls are satisfied.

- c. In the event that the gas collection system for emissions units P001 through P004 is inoperable, all valves which vent landfill gas to the atmosphere shall be closed within 1 hour after the gas collection system becomes inoperable.

### 3. Monitoring and/or Record Keeping Requirements:

The permittee shall properly calibrate, operate, and maintain the monitoring equipment associated with emissions units P001 through P004 in accordance with the manufacturer's recommendations, instructions and operating manuals:

- a. A Daniels system shall be used to determine the heating value (in MMBtu/scf) of the landfill gas (based on methane content at LHV) at the main fuel inlet to emissions units P001 through P004. The heating value of the landfill gas shall be measured by the Daniels system or may be measured by another heating value monitoring system with prior approval of the Cleveland Division of Air Quality. The heating value of the landfill gas shall be monitored and recorded at least every 60 minutes when any of the internal combustion engines (emissions units P001 through P004) are in operation.
- b. A gas flow rate measuring device shall be used that provides a measurement of the total gas flow rate (in standard cubic feet per minute, scfm) to emissions units P001 through P004. The permittee shall record the gas flow rate at least every 60 minutes when any of the internal combustion engines (emissions units P001 through P004) are in operation.
- c. If the bypass line valve to emissions units P001 through P004 is closed, the valve shall be held in the closed position with a car-seal or a lock-and-key type configuration or automatic valve shutoff, and the closed position of the valve shall be visually inspected on a monthly basis and a record of the seal or closure mechanism shall be made to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.
- d. If the gas collection system for emissions units P001 through P004 becomes inoperable, the permittee shall maintain records of the dates and times the gas collection system became inoperable, the dates and times of bypass line valve closure, and records of the maintenance performed to restore the normal operation of the gas collection system.
- e. The permittee shall maintain the following records for each hour during the day when landfill gas is routed to any of the internal combustion engines (emissions units P001 through P004):
  - i. the average landfill gas flow rate (scfh);
  - ii. the heating value of the landfill gas, in MMBtu/scf; and
  - iii. the total heating value of the landfill gas, in MMBtu/hr, calculated as (i) multiplied by (ii) and by 60 minutes/hr.

**4. Reporting Requirements:**

The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time when the total heating value of the landfill gas burned in emissions units P001 through P004, combined, exceeded 38.36 MMBtu per hour and actual heating value of the landfill gas for each such hour.

- a. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time when the gas collection system for emissions units P001 through P004 was inoperable and any valve which vents landfill gas to the atmosphere was not closed within 1 hour after the gas collection system became inoperable.

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

**5. Miscellaneous Requirements:**

The landfill site and the gas collection system associated with these 4 internal combustion engines (emissions units P001 through P004) are owned and operated by the Cuyahoga Regional Sanitary Landfill (Ohio EPA premise number 1318247813). A second independent company (MM Cuyahoga Energy LLC) owns and operates the 4 internal combustion engines identified in this Title V permit. The 4 internal combustion engines (2 engines in tandem) are used to drive 2 generators which in turn produce electricity. The engines also serve as the control system for the non-methane organic compound emissions generated by the landfill. As such, the engines are required to be operated in compliance with the control system requirements specified in OAC rule 3745-76-07(B)(2)(c). The applicable operational and performance testing requirements from OAC rule 3745-76-07(B)(2)(c) have been incorporated into this Title V permit through the best available technology determination established pursuant to OAC rule 3745-31-05(A)(3).

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

None



**Modification Issued: 6/10/2003**

	<u>Applicable Emissions Limitations/Control Measures</u>	
OAC rule 3745-21-08(B)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year.	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average except as provided by rule.
OAC rule 3745-23-06(B)	Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year.	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	Carbon monoxide (CO) emissions shall not exceed 8.34 pounds per hour and 36.53 tons per year.	See section A.I.2.b below.
	Non-methane organic compound (NMOC) emissions shall not exceed 0.87 pound per hour and 3.81 tons per year.	Particulate emissions shall not exceed 0.062 lb/MMBtu actual heat input.
	None, exempt pursuant to OAC rule 3745-18-06(B).	None, exempt pursuant to OAC rule 3745-18-06(B).
	See section A.I.2.c below.	See section A.I.2.c below.
	Particulate emissions (PE) shall not exceed 2.60 tons per year.	See section A.I.2.d below.
	Fugitive particulate emissions shall not exceed 0.17 tons per year.	
	Visible fugitive particulate emissions from roof vents and openings which house the emissions unit shall not exceed 10 percent opacity, as a three-minute average.	
	See section A.I.2.a below.	
	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-08(B), and 3745-17-11(B)(5)(b).	

Emissions Unit ID: P001

## 2. Additional Terms and Conditions

- 2.a This emissions unit shall reduce NMOC emissions by 98 percent, by weight, or reduce the outlet concentration to less than 20 ppmv (dry basis) as hexane, at 3 percent oxygen.
- 2.b Reasonably available control measures for fugitive emissions from this emissions unit shall be defined as no controls.
- 2.c The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

## II. Operational Restrictions

- 1. This emissions unit shall be operated with a solenoid valve at the inlet to the emissions unit that completely shuts off gas flow to the emissions unit when the emissions unit is not operating.

## III. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall maintain records of the following information:
  - a. the date of the last engine overhaul; and
  - b. the cumulative hours of engine operation since the last overhaul, on a monthly basis.
- 2. The permittee shall perform visible emission checks at the following frequencies:
  - 0-10,000 hours since the last overhaul: monthly;
  - 10,001-30,000 hours since the last overhaul: weekly; and
  - over 30,000 hours since the last overhaul: daily.

The permittee shall perform these checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this

**Modification Issued: 6/10/2003**

emissions unit and for any visible fugitive particulate emissions from the building housing this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log along with the cumulative hours of engine operation since the last over haul. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emission incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the internal combustion engine when the emissions unit is in operation. The combustion temperature monitoring device shall have an accuracy of plus or minus 1 percent of the temperature being measured, expressed in degrees Celsius.
4. The permittee shall maintain records of all 3-hour periods of time during which the average combustion temperature within the internal combustion engine was more than 28 degrees Celsius below the average combustion temperature during the most recent emission test that demonstrated that the emissions unit was in compliance with the emission limitation in section A.I.2.a above.;
5. The permittee shall submit an equipment removal/shutdown report within 30 days prior to removal or cessation of operation of this emissions unit.

**IV. Reporting Requirements**

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b)

Emissions Unit ID: P001

describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Cleveland Division of Air Quality) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the internal combustion engine was more than 28 degrees Celsius below the average combustion temperature during the most recent emission test that demonstrated that the emissions unit was in compliance with the emission limitation in section A.I.2.a above.

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

3. The permittee shall also submit annual reports that specify the total SO<sub>2</sub>, NO<sub>x</sub>, CO, NMOC, and PE emissions from this emissions unit for the previous calendar year. The reports shall be submitted by January 31 of each year.

## **V. Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1. and A.I.2.a of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:  
SO<sub>2</sub> emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year.

**Modification Issued: 6/10/2003****Applicable Compliance Methods:**

Compliance with the hourly SO<sub>2</sub> emission limitation may be based on an emission factor of 0.014 lb of SO<sub>2</sub>/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

**b. Emission Limitations:**

NO<sub>x</sub> emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year.

**Applicable Compliance Methods:**

Compliance with the hourly NO<sub>x</sub> emission limitation may be based on an emission factor of 0.2 lb of NO<sub>x</sub>/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

**c. Emission Limitations:**

CO emissions shall not exceed 8.34 pounds per hour and 36.53 tons per year.

**Applicable Compliance Methods:**

Compliance with the hourly CO emission limitation may be based on an emission factor of 0.87 lb of CO/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through

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emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

d. Emission Limitations:

NMOC emissions shall not exceed 0.87 pound per hour and 3.81 tons per year.

Applicable Compliance Methods:

Compliance with the hourly NMOC emission limitation may be based on an emission factor of 0.073 lb of NMOC/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25C.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

e. Emission Limitations:

PE shall not exceed 0.062 lb/MMBtu actual heat input and 2.60 tons per year.

Applicable Compliance Methods:

Compliance may be determined by dividing a particulate emission rate of 0.013 pound PE/hr (based on emission testing conducted in May, 1999) by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the lb/MMBtu emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

The annual limitation was established by multiplying the lb/MMBtu emission limitation by the emissions unit's maximum rated heat input capacity (9.59 MMBtu/hr) by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/MMBtu emission limitation.

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- f. Emission Limitation:  
Fugitive particulate emissions shall not exceed 0.17 tons per year.

## Applicable Compliance Methods:

The emission limitation was developed by the multiplying the gallons of engine oil lost per day by one (1) minus the capture efficiency of the filter media (95%) which equals 0.0385 lb/hr. Then multiply the pound per hour value by the annual hours of operation and divide by 2,000 lbs/ton.

2. The permittee shall conduct emission testing for each emissions unit in accordance with the following requirements:

- a. the emission testing shall be conducted within 180 days after the installation of the emissions;
- b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PM, SO<sub>2</sub>, NO<sub>x</sub>, CO and NMOC for each emissions unit;
- c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for PM, Method 5 of 40 CFR part 60, Appendix A  
for SO<sub>2</sub>, Method 6 of 40 CFR part 60, Appendix A  
for NO<sub>x</sub>, Method 7e of 40 CFR part 60, Appendix A  
for CO, Method 10 of 40 CFR part 60, Appendix A  
for NMOC, Method 25 of 40 CFR part 60, Appendix A

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA; and,

- d. the test shall be conducted while the emissions unit is operating at or near it's maximum capacity, unless otherwise specified or approved by the Cleveland Division of Air Quality.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland Division of Air Quality . 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 Cleveland Division of Air Quality's refusal to accept the results of the emission test(s).

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Personnel from the Cleveland Division of Air Quality's 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 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 Cleveland Division of Air Quality 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 the prior approval from the Cleveland Division of Air Quality .

3. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

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

4. Emission Limitation:

This emissions unit shall reduce NMOC emissions by 98 percent, by weight, or reduce the outlet concentration to less than 20 ppmv (dry basis) as hexane, at 3 percent oxygen.

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. the emission testing shall be conducted within 6 months prior to the Title V permit expiration;
- b. the emission testing shall be conducted to demonstrate compliance with the NMOC reduction requirement or the outlet concentration limitation;
- c. the following test methods shall be employed: Methods 1 through 4 and 25C of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA; and
- d. the test shall be conducted while the emissions unit is operating at or near its maximum capacity unless otherwise specified or approved by the Cleveland Division of Air Quality.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland Division of Air Quality. The "Intent to Test"

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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 Cleveland Division of Air Quality's refusal to accept the results of the emission test(s).

Personnel from the Cleveland Division of Air Quality 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland Division of Air Quality 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 Cleveland Division of Air Quality.

5. Emission Limitation:  
Visible fugitive particulate emissions from roof vents and openings which house the emissions unit shall not exceed 10 percent opacity, as a three-minute average.

Applicable Compliance Methods:

Compliance shall be determined through visible emission observation performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures in OAC rule 3745-17-03(B)(1).

**VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
None	None	None

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

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

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None



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	<u>Applicable Emissions Limitations/Control Measures</u>	
OAC rule 3745-21-08(B)		Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except as provided by rule.
OAC rule 3745-23-06(B)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year.	
	Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year.	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	Carbon monoxide (CO) emissions shall not exceed 8.34 pounds per hour and 36.53 tons per year.	See section A.I.2.b below.
	Non-methane organic compound (NMOC) emissions shall not exceed 0.87 pound per hour and 3.81 tons per year.	Particulate emissions shall not exceed 0.062 lb/MMBtu actual heat input. None, exempt pursuant to OAC rule 3745-18-06(B).
		See section A.I.2.c below.
	Particulate emissions (PE) shall not exceed 2.60 tons per year.	See section A.I.2.d below.
	Fugitive particulate emissions shall not exceed 0.17 tons per year.	
	Visible fugitive particulate emissions from roof vents and openings which house the emissions unit shall not exceed 10 percent opacity, as a three-minute average.	
	See section A.I.2.a below.	
	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-08(B), and 3745-17-11(B)(5)(b).	

**Modification Issued: 6/10/2003****2. Additional Terms and Conditions**

- 2.a** This emissions unit shall reduce NMOC emissions by 98 percent, by weight, or reduce the outlet concentration to less than 20 ppmv (dry basis) as hexane, at 3 percent oxygen.
- 2.b** Reasonably available control measures for fugitive emissions from this emissions unit shall be defined as no controls.
- 2.c** The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

**II. Operational Restrictions**

- 1. This emissions unit shall be operated with a solenoid valve at the inlet to the emissions unit that completely shuts off gas flow to the emissions unit when the emissions unit is not operating.

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

- 1. The permittee shall maintain records of the following information:
  - a. the date of the last engine overhaul; and
  - b. the cumulative hours of engine operation since the last overhaul, on a monthly basis.
- 2. The permittee shall perform visible emission checks at the following frequencies:
  - 0-10,000 hours since the last overhaul: monthly;
  - 10,001-30,000 hours since the last overhaul: weekly; and

over 30,000 hours since the last overhaul: daily.

The permittee shall perform these checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emission incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the internal combustion engine when the emissions unit is in operation. The combustion temperature monitoring device shall have an accuracy of plus or minus 1 percent of the temperature being measured, expressed in degrees Celsius.
4. The permittee shall maintain records of all 3-hour periods of time during which the average combustion temperature within the internal combustion engine was more than 28 degrees Celsius below the average combustion temperature during the most recent emission test that demonstrated that the emissions unit was in compliance with the emission limitation in section A.I.2.a above.;
5. The permittee shall submit an equipment removal/shutdown report within 30 days prior to removal or cessation of operation of this emissions unit.

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

1. The permittee shall submit semiannual written reports that (a) identify all days during which any

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visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Cleveland Division of Air Quality) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the internal combustion engine was more than 28 degrees Celsius below the average combustion temperature during the most recent emission test that demonstrated that the emissions unit was in compliance with the emission limitation in section A.I.2.a above.

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

3. The permittee shall also submit annual reports that specify the total SO<sub>2</sub>, NO<sub>x</sub>, CO, NMOC, and PE emissions from this emissions unit for the previous calendar year. The reports shall be submitted by January 31 of each year.

## V. Testing Requirements

1. Compliance with the emission limitations in sections A.I.1. and A.I.2.a of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:  
SO<sub>2</sub> emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year.

**Modification Issued: 6/10/2003****Applicable Compliance Methods:**

Compliance with the hourly SO<sub>2</sub> emission limitation may be based on an emission factor of 0.014 lb of SO<sub>2</sub>/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

**b. Emission Limitations:**

NO<sub>x</sub> emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year.

**Applicable Compliance Methods:**

Compliance with the hourly NO<sub>x</sub> emission limitation may be based on an emission factor of 0.2 lb of NO<sub>x</sub>/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

**c. Emission Limitations:**

CO emissions shall not exceed 8.34 pounds per hour and 36.53 tons per year.

**Applicable Compliance Methods:**

Compliance with the hourly CO emission limitation may be based on an emission factor of 0.87 lb of CO/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through

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emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

d. Emission Limitations:

NMOC emissions shall not exceed 0.87 pound per hour and 3.81 tons per year.

Applicable Compliance Methods:

Compliance with the hourly NMOC emission limitation may be based on an emission factor of 0.073 lb of NMOC/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25C.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

e. Emission Limitations:

PE shall not exceed 0.062 lb/MMBtu actual heat input and 2.60 tons per year.

Applicable Compliance Methods:

Compliance may be determined by dividing a particulate emission rate of 0.013 pound PE/hr (based on emission testing conducted in May, 1999) by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the lb/MMBtu emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

The annual limitation was established by multiplying the lb/MMBtu emission limitation by the emissions unit's maximum rated heat input capacity (9.59 MMBtu/hr) by the maximum

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possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/MMBtu emission limitation.

- f. Emission Limitation:  
 Fugitive particulate emissions shall not exceed 0.17 tons per year.

Applicable Compliance Methods:

The emission limitation was developed by the multiplying the gallons of engine oil lost per day by one (1) minus the capture efficiency of the filter media (95%) which equals 0.0385 lb/hr. Then multiply the pound per hour value by the annual hours of operation and divide by 2,000 lbs/ton.

2. The permittee shall conduct emission testing for each emissions unit in accordance with the following requirements:

- a. the emission testing shall be conducted within 180 days after the installation of the emissions;
- b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PM, SO<sub>2</sub>, NO<sub>x</sub>, CO and NMOC for each emissions unit;
- c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for PM, Method 5 of 40 CFR part 60, Appendix A  
 for SO<sub>2</sub>, Method 6 of 40 CFR part 60, Appendix A  
 for NO<sub>x</sub>, Method 7e of 40 CFR part 60, Appendix A  
 for CO, Method 10 of 40 CFR part 60, Appendix A  
 for NMOC, Method 25 of 40 CFR part 60, Appendix A

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA; and,

- d. the test shall be conducted while the emissions unit is operating at or near it's maximum capacity, unless otherwise specified or approved by the Cleveland Division of Air Quality .

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland Division of Air Quality . 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 Cleveland Division of Air Quality's refusal to accept the results of the emission test(s).

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Personnel from the Cleveland Division of Air Quality's 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 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 Cleveland Division of Air Quality 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 the prior approval from the Cleveland Division of Air Quality .

3. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

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

4. Emission Limitations:

This emissions unit shall reduce NMOC emissions by 98 percent, by weight, or reduce the outlet concentration to less than 20 ppmv (dry basis) as hexane, at 3 percent oxygen.

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. the emission testing shall be conducted within 6 months prior to the Title V permit expiration;
- b. the emission testing shall be conducted to demonstrate compliance with the NMOC reduction requirement or the outlet concentration limitation;
- c. the following test methods shall be employed: Methods 1 through 4 and 25C of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA; and
- d. the test shall be conducted while the emissions unit is operating at or near its maximum

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capacity unless otherwise specified or approved by the Cleveland Division of Air Quality.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland Division of Air Quality. 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 Cleveland Division of Air Quality's refusal to accept the results of the emission test(s).

Personnel from the Cleveland Division of Air Quality 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland Division of Air Quality 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 Cleveland Division of Air Quality.

5. Emission Limitation:  
 Visible fugitive particulate emissions from roof vents and openings which house the emissions unit shall not exceed 10 percent opacity, as a three-minute average.

Applicable Compliance Methods:

Compliance shall be determined through visible emission observation performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures in OAC rule 3745-17-03(B)(1).

## **VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
None	None	None

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

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

None

**IV. Reporting Requirements**

None

**II. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None



Applicable Emissions <u>Limitations/Control</u> <u>Measures</u>	
Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year.	See section A.I.2.a below.  The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-08(B), and 3745-17-11(B)(5)(b).
Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year.	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average except as provided by rule.
Carbon monoxide (CO) emissions shall not exceed 8.34 pounds per hour and 36.53 tons per year.	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Non-methane organic compound (NMOC) emissions shall not exceed 0.87 pound per hour and 3.81 tons per year.	See section A.I.2.b below.  Particulate emissions shall not exceed 0.062 lb/MMBtu actual heat input.
Particulate emissions (PE) shall not exceed 2.60 tons per year.	None, exempt pursuant to OAC rule 3745-18-06(B).  See section A.I.2.c below.
Fugitive particulate emissions shall not exceed 0.17 tons per year.	See section A.I.2.d below.
Visible fugitive particulate emissions from roof vents and openings which house the emissions unit shall not exceed 10 percent opacity, as a three-minute average.	

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

- 2.a** This emissions unit shall reduce NMOC emissions by 98 percent, by weight, or reduce the outlet concentration to less than 20 ppmv (dry basis) as hexane, at 3 percent oxygen.
- 2.b** Reasonably available control measures for fugitive emissions from this emissions unit shall be defined as no controls.
- 2.c** The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

## **II. Operational Restrictions**

- 1. This emissions unit shall be operated with a solenoid valve at the inlet to the emissions unit that completely shuts off gas flow to the emissions unit when the emissions unit is not operating.

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

- 1. The permittee shall maintain records of the following information:
  - a. the date of the last engine overhaul; and
  - b. the cumulative hours of engine operation since the last overhaul, on a monthly basis.
- 2. The permittee shall perform visible emission checks at the following frequencies:
  - 0-10,000 hours since the last overhaul: monthly;
  - 10,001-30,000 hours since the last overhaul: weekly; and

over 30,000 hours since the last overhaul: daily.

The permittee shall perform these checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emission incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the internal combustion engine when the emissions unit is in operation. The combustion temperature monitoring device shall have an accuracy of plus or minus 1 percent of the temperature being measured, expressed in degrees Celsius.
4. The permittee shall maintain records of all 3-hour periods of time during which the average combustion temperature within the internal combustion engine was more than 28 degrees Celsius below the average combustion temperature during the most recent emission test that demonstrated that the emissions unit was in compliance with the emission limitation in section A.I.2.a above.;
5. The permittee shall submit an equipment removal/shutdown report within 30 days prior to removal or cessation of operation of this emissions unit.

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

1. The permittee shall submit semiannual written reports that (a) identify all days during which any

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visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Cleveland Division of Air Quality) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the internal combustion engine was more than 28 degrees Celsius below the average combustion temperature during the most recent emission test that demonstrated that the emissions unit was in compliance with the emission limitation in section A.I.2.a above.

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

3. The permittee shall also submit annual reports that specify the total SO<sub>2</sub>, NO<sub>x</sub>, CO, NMOC, and PE emissions from this emissions unit for the previous calendar year. The reports shall be submitted by January 31 of each year.

**V. Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1. and A.I.2.a of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:  
SO<sub>2</sub> emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year.

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**Applicable Compliance Methods:**

Compliance with the hourly SO<sub>2</sub> emission limitation may be based on an emission factor of 0.014 lb of SO<sub>2</sub>/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

**b. Emission Limitations:**

NO<sub>x</sub> emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year.

**Applicable Compliance Methods:**

Compliance with the hourly NO<sub>x</sub> emission limitation may be based on an emission factor of 0.2 lb of NO<sub>x</sub>/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

**c. Emission Limitations:**

CO emissions shall not exceed 8.34 pounds per hour and 36.53 tons per year.

**Applicable Compliance Methods:**

Compliance with the hourly CO emission limitation may be based on an emission factor of 0.87 lb of CO/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

The annual limitation was established by multiplying the hourly emission limitation by the

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maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

- d. Emission Limitations:  
NMOC emissions shall not exceed 0.87 pound per hour and 3.81 tons per year.

Applicable Compliance Methods:

Compliance with the hourly NMOC emission limitation may be based on an emission factor of 0.073 lb of NMOC/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25C.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

- e. Emission Limitations:  
PE shall not exceed 0.062 lb/MMBtu actual heat input and 2.60 tons per year.

Applicable Compliance Methods:

Compliance may be determined by dividing a particulate emission rate of 0.013 pound PE/hr (based on emission testing conducted in May, 1999) by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the lb/MMBtu emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

The annual limitation was established by multiplying the lb/MMBtu emission limitation by the emissions unit's maximum rated heat input capacity (9.59 MMBtu/hr) by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/MMBtu emission limitation.

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- f. Emission Limitation:  
 Fugitive particulate emissions shall not exceed 0.17 tons per year.

Applicable Compliance Methods:

The emission limitation was developed by the multiplying the gallons of engine oil lost per day by one (1) minus the capture efficiency of the filter media (95%) which equals 0.0385 lb/hr. Then multiply the pound per hour value by the annual hours of operation and divide by 2,000 lbs/ton.

2. The permittee shall conduct emission testing for each emissions unit in accordance with the following requirements:
- a. the emission testing shall be conducted within 180 days after the installation of the emissions;
  - b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PM, SO<sub>2</sub>, NO<sub>x</sub>, CO and NMOC for each emissions unit;
  - c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for PM, Method 5 of 40 CFR part 60, Appendix A  
 for SO<sub>2</sub>, Method 6 of 40 CFR part 60, Appendix A  
 for NO<sub>x</sub>, Method 7e of 40 CFR part 60, Appendix A  
 for CO, Method 10 of 40 CFR part 60, Appendix A  
 for NMOC, Method 25 of 40 CFR part 60, Appendix A

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA; and,

- d. the test shall be conducted while the emissions unit is operating at or near it's maximum capacity, unless otherwise specified or approved by the Cleveland Division of Air Quality .

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland Division of Air Quality . 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 Cleveland Division of Air Quality's refusal to accept the results of the emission test(s).

Personnel from the Cleveland Division of Air Quality's 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 from the

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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 Cleveland Division of Air Quality 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 the prior approval from the Cleveland Division of Air Quality .

3. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

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

4. Emission Limitation:

This emissions unit shall reduce NMOC emissions by 98 percent, by weight, or reduce the outlet concentration to less than 20 ppmv (dry basis) as hexane, at 3 percent oxygen.

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. the emission testing shall be conducted within 6 months prior to the Title V permit expiration;
- b. the emission testing shall be conducted to demonstrate compliance with the NMOC reduction requirement or the outlet concentration limitation;
- c. the following test methods shall be employed: Methods 1 through 4 and 25C of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA; and
- d. the test shall be conducted while the emissions unit is operating at or near its maximum capacity unless otherwise specified or approved by the Cleveland Division of Air Quality.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland Division of Air Quality. The "Intent to Test"

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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 Cleveland Division of Air Quality's refusal to accept the results of the emission test(s).

Personnel from the Cleveland Division of Air Quality 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland Division of Air Quality 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 Cleveland Division of Air Quality.

5. Emission Limitation:

Visible fugitive particulate emissions from roof vents and openings which house the emissions unit shall not exceed 10 percent opacity, as a three-minute average.

Applicable Compliance Methods:

Compliance shall be determined through visible emission observation performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures in OAC rule 3745-17-03(B)(1).

## **VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
None	None	None

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**II Monitoring and/or Recordkeeping Requirements**

None

**IV Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P004 - 9.59 MMBtu/hr Caterpillar internal combustion engine for the burning of landfill gas including crankcase vents that vent inside the building housing the engine -Engine #4 - P004	OAC rule 3745-31-05(A)(3)           OAC rule 3745-17-07(A)           OAC rule 3745-17-07(B)(1)           OAC rule 3745-17-08(B)           OAC rule 3745-17-11(B)(5)(b)           OAC rule 3745-18-06(G)

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	<p style="text-align: center;"><u>Applicable Emissions Limitations/Control Measures</u></p>	<p>average, except as provided by rule.</p>
OAC rule 3745-21-08(B)		
OAC rule 3745-23-06(B)	<p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year.</p>	<p>The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>
	<p>Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year.</p>	<p>See section A.I.2.b below.</p>
	<p>Carbon monoxide (CO) emissions shall not exceed 8.34 pounds per hour and 36.53 tons per year.</p>	<p>Particulate emissions shall not exceed 0.062 lb/MMBtu actual heat input.</p>
	<p>Non-methane organic compound (NMOC) emissions shall not exceed 0.87 pound per hour and 3.81 tons per year.</p>	<p>None, exempt pursuant to OAC rule 3745-18-06(B).</p>
	<p>Particulate emissions (PE) shall not exceed 2.60 tons per year.</p>	<p>See section A.I.2.c below.</p>
	<p>Fugitive particulate emissions shall not exceed 0.17 tons per year.</p>	<p>See section A.I.2.d below.</p>
	<p>Visible fugitive particulate emissions from roof vents and openings which house the emissions unit shall not exceed 10 percent opacity, as a three-minute average.</p>	
	<p>See section A.I.2.a below.</p>	
	<p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-08(B), and 3745-17-11(B)(5)(b).</p>	
	<p>Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute</p>	

**Modification Issued: 6/10/2003****2. Additional Terms and Conditions**

- 2.a** This emissions unit shall reduce NMOC emissions by 98 percent, by weight, or reduce the outlet concentration to less than 20 ppmv (dry basis) as hexane, at 3 percent oxygen.
- 2.b** Reasonably available control measures for fugitive emissions from this emissions unit shall be defined as no controls.
- 2.c** The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

**II. Operational Restrictions**

- 1. This emissions unit shall be operated with a solenoid valve at the inlet to the emissions unit that completely shuts off gas flow to the emissions unit when the emissions unit is not operating.

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

- 1. The permittee shall maintain records of the following information:
  - a. the date of the last engine overhaul; and
  - b. the cumulative hours of engine operation since the last overhaul, on a monthly basis.
- 2. The permittee shall perform visible emission checks at the following frequencies:
  - 0-10,000 hours since the last overhaul: monthly;
  - 10,001-30,000 hours since the last overhaul: weekly; and

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over 30,000 hours since the last overhaul: daily.

The permittee shall perform these checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emission incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the internal combustion engine when the emissions unit is in operation. The combustion temperature monitoring device shall have an accuracy of plus or minus 1 percent of the temperature being measured, expressed in degrees Celsius.
4. The permittee shall maintain records of all 3-hour periods of time during which the average combustion temperature within the internal combustion engine was more than 28 degrees Celsius below the average combustion temperature during the most recent emission test that demonstrated that the emissions unit was in compliance with the emission limitation in section A.I.2.a above.;
5. The permittee shall submit an equipment removal/shutdown report within 30 days prior to removal or cessation of operation of this emissions unit.

#### IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Cleveland Division of Air Quality) by January 31 and July 31 of each year and shall cover the previous 6-month period.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the internal combustion engine was more than 28 degrees Celsius below the average combustion temperature during the most recent emission test that demonstrated that the emissions unit was in compliance with the emission limitation in section A.I.2.a above.

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

3. The permittee shall also submit annual reports that specify the total SO<sub>2</sub>, NO<sub>x</sub>, CO, NMOC, and PE emissions from this emissions unit for the previous calendar year. The reports shall be submitted by January 31 of each year.

#### V. Testing Requirements

1. Compliance with the emission limitations in sections A.I.1. and A.I.2.a of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:  
SO<sub>2</sub> emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year.

Applicable Compliance Methods:

Compliance with the hourly SO<sub>2</sub> emission limitation may be based on an emission factor of 0.014 lb of SO<sub>2</sub>/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

- ol style="list-style-type: none;">- b. Emission Limitations:

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NO<sub>x</sub> emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year.

**Applicable Compliance Methods:**

Compliance with the hourly NO<sub>x</sub> emission limitation may be based on an emission factor of 0.2 lb of NO<sub>x</sub>/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

c. **Emission Limitations:**

CO emissions shall not exceed 8.34 pounds per hour and 36.53 tons per year.

**Applicable Compliance Methods:**

Compliance with the hourly CO emission limitation may be based on an emission factor of 0.87 lb of CO/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

d. **Emission Limitations:**

NMOC emissions shall not exceed 0.87 pound per hour and 3.81 tons per year.

**Applicable Compliance Methods:**

Compliance with the hourly NMOC emission limitation may be based on an emission factor of 0.073 lb of NMOC/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1

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through 4 and 25C.

The annual limitation was established by multiplying the hourly emission limitation by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the hourly emission limitation.

e. Emission Limitations:

PE shall not exceed 0.062 lb/MMBtu actual heat input and 2.60 tons per year.

Applicable Compliance Methods:

Compliance may be determined by dividing a particulate emission rate of 0.013 pound PE/hr (based on emission testing conducted in May, 1999) by the maximum rated heat input capacity of the emissions unit (9.59 MMBtu/hr).

If required, compliance with the lb/MMBtu emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

The annual limitation was established by multiplying the lb/MMBtu emission limitation by the emissions unit's maximum rated heat input capacity (9.59 MMBtu/hr) by the maximum possible annual operating hours (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/MMBtu emission limitation.

f. Emission Limitation:

Fugitive particulate emissions shall not exceed 0.17 tons per year.

Applicable Compliance Methods:

The emission limitation was developed by the multiplying the gallons of engine oil lost per day by one (1) minus the capture efficiency of the filter media (95%) which equals 0.0385 lb/hr. Then multiply the pound per hour value by the annual hours of operation and divide by 2,000 lbs/ton.

2. The permittee shall conduct emission testing for each emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted within 180 days after the installation of the emissions;

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- b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PM, SO<sub>2</sub>, NO<sub>x</sub>, CO and NMOC for each emissions unit;
- c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for PM, Method 5 of 40 CFR part 60, Appendix A  
 for SO<sub>2</sub>, Method 6 of 40 CFR part 60, Appendix A  
 for NO<sub>x</sub>, Method 7e of 40 CFR part 60, Appendix A  
 for CO, Method 10 of 40 CFR part 60, Appendix A  
 for NMOC, Method 25 of 40 CFR part 60, Appendix A

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA; and,

- d. the test shall be conducted while the emissions unit is operating at or near it's maximum capacity, unless otherwise specified or approved by the Cleveland Division of Air Quality .

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland Division of Air Quality . 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 Cleveland Division of Air Quality's refusal to accept the results of the emission test(s).

Personnel from the Cleveland Division of Air Quality's 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 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 Cleveland Division of Air Quality 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 the prior approval from the Cleveland Division of Air Quality .

- 3. Emission Limitation:  
 Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC

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rule 3745-17-03(B)(1).

4. Emission Limitation:

This emissions unit shall reduce NMOC emissions by 98 percent, by weight, or reduce the outlet concentration to less than 20 ppmv (dry basis) as hexane, at 3 percent oxygen.

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. the emission testing shall be conducted within 6 months prior to the Title V permit expiration;
- b. the emission testing shall be conducted to demonstrate compliance with the NMOC reduction requirement or the outlet concentration limitation;
- c. the following test methods shall be employed: Methods 1 through 4 and 25C of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA; and
- d. the test shall be conducted while the emissions unit is operating at or near its maximum capacity unless otherwise specified or approved by the Cleveland Division of Air Quality.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland Division of Air Quality. 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 Cleveland Division of Air Quality's refusal to accept the results of the emission test(s).

Personnel from the Cleveland Division of Air Quality 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland Division of Air Quality within 30 days following completion of the test(s). The permittee may request

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additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland Division of Air Quality.

- 5. Emission Limitation:  
Visible fugitive particulate emissions from roof vents and openings which house the emissions unit shall not exceed 10 percent opacity, as a three-minute average.

Applicable Compliance Methods:

Compliance shall be determined through visible emission observation performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures in OAC rule 3745-17-03(B)(1).

**VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
None	None	None

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

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

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None