Facility ID: 1318538151 Issuance type: Title V Draft Permit

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part III" and before "I. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1318538151 Issuance type: Title V Draft Permit

Part II - Specific Facility Terms and Conditions

a **State and Federally Enforceable Section**

1. Emission Limitations:

In accordance with OAC rule 3745-31-05(A)(3) (PTI #13-3400), the combined annual emissions from emissions units P001 through P004 shall not exceed the following:

a. Sulfur dioxide (SO2) emissions shall not exceed 26.44 tons per year.

b. Nitrogen oxides (NOx) emissions shall not exceed 51.84 tons per year.

c. Carbon monoxide (CO) emissions shall not exceed 138.04 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 9.84 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 SO2, NOx, 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 SO2, NOx, 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 SO2, NOx, 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 (9.06 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 36.24 MMBtu/hr.

b. Emissions units P001 through P004 shall be designed and operated in such a manner that the requirements of OAC Chapter 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 15 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, 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 landfill gas flow rate (scfm);

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 36.24 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).

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1318538151 Issuance type: Title V Draft Permit

b **State Only Enforceable Section**

1. The following insignificant emissions units are located at this facility:

Z001 crankcase vents;
Z002 1,500-gallon used oil storage tank; and
Z003 1,500-gallon new oil storage tank.

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a permit to install for the emissions unit.

Go to Part III for Emissions Unit P001
Go to Part III for Emissions Unit P002
Go to Part III for Emissions Unit P003
Go to Part III for Emissions Unit P004

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1318538151 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

Go to the top of this document

Facility ID: 1318538151 Emissions Unit ID: P001 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
9.06 MMBtu/hr Caterpillar internal combustion engine for the burning of landfill gas - Engine #1 - P001	OAC rule 3745-31-05(A)(3) (PTI # 13-3400)	Sulfur dioxide (SO2) emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year. Nitrogen oxides (NOx) emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year. Carbon monoxide (CO) emissions shall not exceed 7.88 pounds per hour and 34.51 tons per year. Non-methane organic compound (NMOC) emissions shall not exceed 0.87 pound per hour and 3.81 tons per year. Particulate emissions (PE) shall not exceed 2.46 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) and 3745-17-11(B)(5)(b).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(5)(b)	Particulate emissions shall not exceed 0.062 lb/MMBtu actual heat input.
	OAC rule 3745-18-06(G)	None, exempt pursuant to OAC rule 3745-18-06(B).
	OAC rule 3745-21-08(B)	See section A.I.2.b below.
	OAC rule 3745-23-06(B)	See section A.I.2.c below.

2. **Additional Terms and Conditions**

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.

b. The permittee has satisfied 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) in Permit to Install 13-3400.

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.

c. The permittee has satisfied 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) in Permit to Install 13-3400.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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

1. The permittee shall perform daily 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.

2. 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.

   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.

3. The permittee shall submit an equipment removal/shutdown report within 30 days prior to removal or cessation of operation of this emissions unit.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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 SO2, NOx, 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.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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:
SO2 emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year.

Applicable Compliance Methods:
Compliance with the hourly SO2 emission limitation may be based on an emission factor of 0.014 lb of SO2/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.06 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:
NOx emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year.

Applicable Compliance Methods:
Compliance with the hourly NOx emission limitation may be based on an emission factor of 0.2 lb of NOx/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.06 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 7.88 pounds per hour and 34.51 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 (9.06 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 (9.06 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.

2. 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 demonstated 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).

3. Emission Limitations:
PE shall not exceed 0.062 lb/MMBtu actual heat input and 2.46 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 (9.06 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 (9.06 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.

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

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1318538151 Issuance type: Title V Draft Permit

Go to the top of this document

Facility ID: 1318538151 Emissions Unit ID: P001 Issuance type: Title V Draft Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. **Reporting Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1318538151 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

Go to the top of this document

Facility ID: 1318538151 Emissions Unit ID: P002 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
9.06 MMBtu/hr Caterpillar internal combustion engine for the burning of landfill gas - Engine #2 - P002	OAC rule 3745-31-05(A)(3) (PTI # 13-3400)	Sulfur dioxide (SO2) emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year. Nitrogen oxides (NOx) emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year. Carbon monoxide (CO) emissions shall not exceed 7.88 pounds per hour and 34.51 tons per year. Non-methane organic compound (NMOC) emissions shall not exceed 0.87 pound per hour and 3.81 tons per year. Particulate emissions (PE) shall not exceed 2.46 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) and 3745-17-11(B)(5)(b).
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as provided by rule.
OAC rule 3745-17-11(B)(5)(b)	Particulate emissions shall not exceed 0.062 lb/MMBtu actual heat input.
OAC rule 3745-18-06(G)	None, exempt pursuant to OAC rule 3745-18-06(B).
OAC rule 3745-21-08(B)	See section A.I.2.b below.
OAC rule 3745-23-06(B)	See section A.I.2.c below.

2. **Additional Terms and Conditions**

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.

b. The permittee has satisfied 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) in Permit to Install 13-3400.

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.

c. The permittee has satisfied 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) in Permit to Install 13-3400.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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

1. The permittee shall perform daily 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.

2. 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.

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.

3. The permittee shall submit an equipment removal/shutdown report within 30 days prior to removal or cessation of operation of this emissions unit.

Go to the top of this document

Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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 SO2, NOx, 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.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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:
      SO2 emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year.

      Applicable Compliance Methods:
      Compliance with the hourly SO2 emission limitation may be based on an emission factor of 0.014 lb of SO2/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.06 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:
      NOx emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year.

      Applicable Compliance Methods:
      Compliance with the hourly NOx emission limitation may be based on an emission factor of 0.2 lb of NOx/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.06 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 7.88 pounds per hour and 34.51 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 (9.06 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 (9.06 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.

2. 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 demonstated 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).

3. Emission Limitations:

PE shall not exceed 0.062 lb/MMBtu actual heat input and 2.46 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 (9.06 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 (9.06 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.

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

Go to the top of this document
Go to the top of Part III for this Emissions Unit

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1318538151 Issuance type: Title V Draft Permit

Go to the top of this document

Facility ID: 1318538151 Emissions Unit ID: P002 Issuance type: Title V Draft Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. **Reporting Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1318538151 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

Go to the top of this document

Facility ID: 1318538151 Emissions Unit ID: P003 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
9.06 MMBtu/hr Caterpillar internal combustion engine for the burning of landfill gas - Engine #3 - P003	OAC rule 3745-31-05(A)(3) (PTI # 13-3400)	Sulfur dioxide (SO2) emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year. Nitrogen oxides (NOx) emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year. Carbon monoxide (CO) emissions shall not exceed 7.88 pounds per hour and 34.51 tons per year. Non-methane organic compound (NMOC) emissions shall not exceed 0.87 pound per hour and 3.81 tons per year. Particulate emissions (PE) shall not exceed 2.46 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) and 3745-17-11(B)(5)(b).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(5)(b)	Particulate emissions shall not exceed 0.062 lb/MMBtu actual heat input.
	OAC rule 3745-18-06(G)	None, exempt pursuant to OAC rule 3745-18-06(B).
	OAC rule 3745-21-08(B)	See section A.I.2.b below.
	OAC rule 3745-23-06(B)	See section A.I.2.c below.

2. **Additional Terms and Conditions**

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.

b. The permittee has satisfied 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) in Permit to Install 13-3400.

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.

c. The permittee has satisfied 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) in Permit to Install 13-3400.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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

1. The permittee shall perform daily 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.

2. 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.

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.

3. The permittee shall submit an equipment removal/shutdown report within 30 days prior to removal or cessation of operation of this emissions unit.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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 SO2, NOx, 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.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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:
SO2 emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year.

Applicable Compliance Methods:
Compliance with the hourly SO2 emission limitation may be based on an emission factor of 0.014 lb of SO2/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.06 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:
NOx emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year.

Applicable Compliance Methods:
Compliance with the hourly NOx emission limitation may be based on an emission factor of 0.2 lb of NOx/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat

input capacity of the emissions unit (9.06 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 7.88 pounds per hour and 34.51 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 (9.06 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 (9.06 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.

2. 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 demonstated 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).

3. Emission Limitations:
PE shall not exceed 0.062 lb/MMBtu actual heat input and 2.46 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 (9.06 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 (9.06 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.

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

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1318538151 Issuance type: Title V Draft Permit

Go to the top of this document

Facility ID: 1318538151 Emissions Unit ID: P003 Issuance type: Title V Draft Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. **Reporting Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1318538151 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

Go to the top of this document

Facility ID: 1318538151 Emissions Unit ID: P004 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
9.06 MMBtu/hr Caterpillar internal combustion engine for the burning of landfill gas - Engine #4 - P004	OAC rule 3745-31-05(A)(3) (PTI # 13-3400)	Sulfur dioxide (SO2) emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year. Nitrogen oxides (NOx) emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year. Carbon monoxide (CO) emissions shall not exceed 7.88 pounds per hour and 34.51 tons per year. Non-methane organic compound (NMOC) emissions shall not exceed 0.87 pound per hour and 3.81 tons per year. Particulate emissions (PE) shall not exceed 2.46 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) and 3745-17-11(B)(5)(b).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(5)(b)	Particulate emissions shall not exceed 0.062 lb/MMBtu actual heat input.
	OAC rule 3745-18-06(G)	None, exempt pursuant to OAC rule 3745-18-06(B).
	OAC rule 3745-21-08(B)	See section A.I.2.b below.
	OAC rule 3745-23-06(B)	See section A.I.2.c below.

2. **Additional Terms and Conditions**

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.

b. The permittee has satisfied 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) in Permit to Install 13-3400.

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.

c. The permittee has satisfied 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) in Permit to Install 13-3400.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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

1. The permittee shall perform daily 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.

2. 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.

   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.

3. The permittee shall submit an equipment removal/shutdown report within 30 days prior to removal or cessation of operation of this emissions unit.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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 SO2, NOx, 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.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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:
SO2 emissions shall not exceed 1.51 pounds per hour and 6.61 tons per year.

Applicable Compliance Methods:
Compliance with the hourly SO2 emission limitation may be based on an emission factor of 0.014 lb of SO2/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.06 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:
NOx emissions shall not exceed 2.96 pounds per hour and 12.96 tons per year.

Applicable Compliance Methods:
Compliance with the hourly NOx emission limitation may be based on an emission factor of 0.2 lb of NOx/MMBtu (based on emission testing conducted in May, 1999) multiplied by the maximum rated heat input capacity of the emissions unit (9.06 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 7.88 pounds per hour and 34.51 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 (9.06 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 (9.06 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.

2. 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 demonstated 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).

3. Emission Limitations:

PE shall not exceed 0.062 lb/MMBtu actual heat input and 2.46 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 (9.06 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 (9.06 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.

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

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1318538151 Issuance type: Title V Draft Permit

Go to the top of this document

Facility ID: 1318538151 Emissions Unit ID: P004 Issuance type: Title V Draft Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or

control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

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

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. **Reporting Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None