State of Ohio Environmental Protection Agency

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

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

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

RE: FINAL PERMIT TO INSTALL
LORAIN COUNTY
Application No: 02-17062

DATE: 4/22/2003

CERTIFIED MAIL

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

Lorain County Landfill LFG Power Station
Leslie Cook
7700 San Felipe, Suite 480
Houston, TX 77063

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

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

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

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

Very truly yours,

Michael W. Ahern

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

CC: USEPA **NEDO**

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install **Issue Date: 4/22/2003**
Terms and Conditions **Effective Date: 4/22/2003**

FINAL PERMIT TO INSTALL 02-17062

Application Number: 02-17062

APS Premise Number: 0247100968

Permit Fee: **$1600**

Name of Facility: Lorain County Landfill LFG Power Station

Person to Contact: Leslie Cook

Address: 7700 San Felipe, Suite 480
Houston, TX 77063

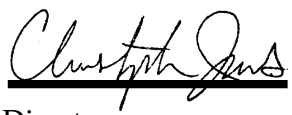
Location of proposed air contaminant source(s) [emissions unit(s)]:
43502 Oberlin-Elyria Rd.
Oberlin, Ohio

Description of proposed emissions unit(s):
LFG electric power generation station.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency



Director

Part I - GENERAL TERMS AND CONDITIONS

A. 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

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.

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 application must be made to the Director for the installation or modification of any other emissions unit(s).

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 <u>Federally Enforceable</u> 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

Pollutant	Tons Per Year
NOx	204.8
VOC	24.0
SO2	8.0
PE	12.8
PM10	13.04
CO	342.4
HCl	9.6

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

1. Demonstrating compliance with the testing requirements of this permit shall be based upon testing three (3) of the units. If the results of testing three units demonstrate that either any of the three units tested are not in compliance with the permit allowable emissions limitations, or that there is greater than a 10% variance of each other, Ohio EPA may require the facility shall test an additional three (3) emissions units that have not been tested to date. After issuance of a Title V permit, the facility shall test three (3) emissions units at the time of each permit renewal, rotating through the existing emissions units until all have been tested at least once, then continuing to rotate through the emissions units in the order in which they were initially

2. If for any reason, all generators at the facility are inoperable for more than 72 continuous hours, Ohio EPA Northeast District Office shall be notified by phone within the next 24 hours. Within thirty (30) days of restoring operation, the facility shall submit a report detailing the cause of the shutdown, appropriate corrective measures taken or repairs made, and precautionary measures to be taken to prevent a recurrence.

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

The permit-to-install for emissions units P001 through P008 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit-to-install application. Ohio EPA's “Review of New Sources of Air Toxic Emissions” policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit-to-install application and the ISC model. The predicted 1-hour maximum ground-level concentration from the use of the ISC model was compared to the maximum acceptable ground-level concentration (MAGLC). The following summarizes the results of the modeling for the “worst case” pollutant(s):

Pollutant: Hydrogen Chloride
Ceiling Value (mg/m^3): 2.47
Maximum Hourly Emission Rate (lbs/hr): 2.265
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 13.1
MAGLC (ug/m^3): 57

Pollutant: Formaldehyde
Ceiling Value (mg/m^3): 0.18
Maximum Hourly Emission Rate (lbs/hr): 0.270
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.56
MAGLC (ug/m^3): 4.3

Changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy” is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the “Air Toxic Policy” will still be satisfied. If, upon evaluation, the permittee determines that the “Air Toxic Policy” will not be satisfied, the permittee will

not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower threshold limit value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

2. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit-to-install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit-to-install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P001 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	OAC rule 3745-31-05 (A)(3)	Visible emissions shall not exceed 10% opacity as a six-minute average. Particulate emissions (PE) shall not exceed 0.87 pound per hour, nor 3.8 tons per year PM_{10} emissions shall not exceed 0.37 pound per hour, nor 1.63 tons per year Sulfur dioxide (SO_2) emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year. Organic compound (OC) emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year. Hydrogen chloride (HCl) emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 52, Section 52.21, and OAC rules 3745-31-10 through -20. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 60, Subpart WWW.

40 CFR Part 52, Section 52.21 and OAC rules 3745-31-10 through -20	Carbon monoxide (CO) emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year Oxides of nitrogen (NOx) emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year
40 CFR Part 60, Subpart WWW	Non-methane organic compound (NMOC) emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.
OAC rule 3745-17-11 (B)(5)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07 (A)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-21-08(B)	See I.2.b.
OAC rule 3745-21-07(B)	See I.2.b.
OAC rule 3745-23-06(B)	See I.2.b.

2. Additional Terms and Conditions

2.a The internal combustion engine shall operate using lean burn technology.

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and the "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08(B) and 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 this permit-to-install (PTI).

2.c This internal combustion engine is one of eight (8) internal combustion engines being permitted under this PTI.

II. Operational Restrictions

1. This emissions unit shall burn only landfill gas.

2. The permittee shall install, calibrate, maintain and operate according to the manufacturer's specifications a device at the inlet to the internal combustion engine which completely shuts off gas flow to the internal combustion engine when the internal combustion engine is not operating.

3. When the internal combustion engine is not operating, the landfill gas shall be diverted to the existing enclosed combustor at the Lorain County Landfill or to an internal combustion engine that is operating. Pursuant to Lorain County Landfill's (facility ID number 02-47-00-0760) pending PTI, application number 02-17061, when the internal combustion engine is not operating, the landfill gas shall be diverted to the open flare which will replace the enclosed combustor that is to be installed pursuant to the PTI application, or to an internal combustion engine that is operating.

4. The minimum allowable temperature of the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed minimum allowable temperature has been established as 345˚C (653˚F).

5. The allowable gas flow rate to the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed maximum allowable gas flow rate has been established as 508 standard cubic feet per minute (SCFM, 70˚F and 1 atmosphere) based on a landfill gas methane content of 49%.

III. Monitoring and/or Recordkeeping Requirements

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

   a. the color of the emissions;

   b. the cause of the visible emissions;

   c. the total duration of any visible emissions incident; and,

   d. any corrective actions taken to eliminate the visible emissions.

2. In order to demonstrate ongoing compliance with the requirement to reduce NMOC emissions by 98 weight-percent or reduce the outlet NMOC emissions to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen, the permittee shall:

   a. install, calibrate, and maintain a temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of +/- 1 percent of the temperature

being measured expressed in degrees Celsius or +/- 0.5 degrees Celsius, whichever is greater.

b. install, calibrate, and maintain a device that records gas flow to or bypass of the control device. The gas flow rate measuring device shall record the flow to the control device at least every 15 minutes.

4. The permittee shall collect and record each day all 3-hour blocks of time during which the average combustion chamber temperature within the internal combustion engine was less than the allowable minimum operating temperature as established during the most recent compliance test.

5. The permittee shall collect and record each day all 3-hour blocks of time during which the average landfill gas flow rate to the internal combustion engine exceeds the maximum allowable gas flow rate as established during the most recent compliance test.

6. The permittee shall record each day when a fuel other than landfill gas was burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving the emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit deviation reports which identify the date(s) and duration the gas flow rate to the internal combustion engine exceeded the maximum gas flow rate requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall submit deviation reports which identify the date(s) and duration the combustion chamber temperature of the internal combustion engine did not meet the minimum temperature requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

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

5. Any breakdown or malfunction resulting in the emission of raw landfill gas emissions to the atmosphere shall be reported by phone to the Northeast District Office of Ohio EPA within one hour after the occurrence, or as soon as reasonably possible, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions to the atmosphere. A

summary of the breakdown or malfunction, including the date(s) and time(s) and the measure(s) taken to correct the problem shall be included in the semi-annual deviation report.

V. Testing Requirements

1. Emission Testing Requirement

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

a. the emission testing shall be conducted in accordance with the Facility-wide term II.A.1 of this permit;

b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate, nitrous oxides (NOx), carbon monoxide(CO), organic compounds (OC), and hydrogen chloride (HCl);

c. the emission testing shall be conducted to demonstrate compliance with either the removal of 98 weight-percent of NMOC or the reduction of the outlet concentration of NMOC to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen;

d. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): particulate - Method 5, NOx - Method 7 or 7E, CO - Method 10, HCl - Method 26 or 26A, OC - Method 25 or 25A;

e. upon request, emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for sulfur dioxide (SO_2), by employing test method 6C; and

f. the test(s) shall be conducted while the emissions unit is operating at or near maximum capacity, unless otherwise specified or approved by the Ohio EPA, Northeast District Office.

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District

Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.

2. Compliance with the emission limitation(s) established in this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:
OC emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

b. Emission Limitation:
Visible emissions shall not exceed 10% opacity as a six-minute average.

Applicable Compliance Method:
Compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Method 9.

c. Emission Limitation:
PE shall not exceed 0.87 pound per hour, nor 3.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

d. Emission Limitation:
NOx emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

e. Emission Limitation:
CO emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year.

Applicable Compliance Method:

Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

f. Emission Limitation:
SO_2 emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

g. Emission Limitation:
HCl emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

h. Emission Limitation:
NMOC emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.

Applicable Compliance Method:
Compliance with the control efficiency limitation shall be determined in accordance with the performance test requirement of section V.1.

VI. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emission unit contained in permit to install 02-14092 as issued on December 19, 2000.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P001 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	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.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P002 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	OAC rule 3745-31-05 (A)(3)	Visible emissions shall not exceed 10% opacity as a six-minute average. Particulate emissions (PE) shall not exceed 0.87 pound per hour, nor 3.8 tons per year PM_{10} emissions shall not exceed 0.37 pound per hour, nor 1.63 tons per year Sulfur dioxide (SO_2) emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year. Organic compound (OC) emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year. Hydrogen chloride (HCl) emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 52, Section 52.21, and OAC rules 3745-31-10 through -20. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 60, Subpart WWW.

40 CFR Part 52, Section 52.21 and OAC rules 3745-31-10 through -20	Carbon monoxide (CO) emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year Oxides of nitrogen (NOx) emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year
40 CFR Part 60, Subpart WWW	Non-methane organic compound (NMOC) emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.
OAC rule 3745-17-11 (B)(5)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07 (A)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-21-08(B)	See I.2.b.
OAC rule 3745-21-07(B)	See I.2.b.
OAC rule 3745-23-06(B)	See I.2.b.

2. Additional Terms and Conditions

2.a The internal combustion engine shall operate using lean burn technology.

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and the "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08(B) and 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 this permit-to-install (PTI).

2.c This internal combustion engine is one of eight (8) internal combustion engines being permitted under this PTI.

II. Operational Restrictions

1. This emissions unit shall burn only landfill gas.

2. The permittee shall install, calibrate, maintain and operate according to the manufacturer's specifications a device at the inlet to the internal combustion engine which completely shuts off gas flow to the internal combustion engine when the internal combustion engine is not operating.

3. When the internal combustion engine is not operating, the landfill gas shall be diverted to the existing enclosed combustor at the Lorain County Landfill or to an internal combustion engine that is operating. Pursuant to Lorain County Landfill's (facility ID number 02-47-00-0760) pending PTI, application number 02-17061, when the internal combustion engine is not operating, the landfill gas shall be diverted to the open flare which will replace the enclosed combustor that is to be installed pursuant to the PTI application, or to an internal combustion engine that is operating.

4. The minimum allowable temperature of the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed minimum allowable temperature has been established as 345˚C (653˚F).

5. The allowable gas flow rate to the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed maximum allowable gas flow rate has been established as 508 standard cubic feet per minute (SCFM, 70˚F and 1 atmosphere) based on a landfill gas methane content of 49%.

III. Monitoring and/or Recordkeeping Requirements

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

   a. the color of the emissions;

   b. the cause of the visible emissions;

   c. the total duration of any visible emissions incident; and,

   d. any corrective actions taken to eliminate the visible emissions.

2. In order to demonstrate ongoing compliance with the requirement to reduce NMOC emissions by 98 weight-percent or reduce the outlet NMOC emissions to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen, the permittee shall:

   a. install, calibrate, and maintain a temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of +/- 1 percent of the temperature

being measured expressed in degrees Celsius or +/- 0.5 degrees Celsius, whichever is greater.

b. install, calibrate, and maintain a device that records gas flow to or bypass of the control device. The gas flow rate measuring device shall record the flow to the control device at least every 15 minutes.

4. The permittee shall collect and record each day all 3-hour blocks of time during which the average combustion chamber temperature within the internal combustion engine was less than the allowable minimum operating temperature as established during the most recent compliance test.

5. The permittee shall collect and record each day all 3-hour blocks of time during which the average landfill gas flow rate to the internal combustion engine exceeds the maximum allowable gas flow rate as established during the most recent compliance test.

6. The permittee shall record each day when a fuel other than landfill gas was burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving the emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit deviation reports which identify the date(s) and duration the gas flow rate to the internal combustion engine exceeded the maximum gas flow rate requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall submit deviation reports which identify the date(s) and duration the combustion chamber temperature of the internal combustion engine did not meet the minimum temperature requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

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

5. Any breakdown or malfunction resulting in the emission of raw landfill gas emissions to the atmosphere shall be reported by phone to the Northeast District Office of Ohio EPA within one hour after the occurrence, or as soon as reasonably possible, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions to the atmosphere. A

summary of the breakdown or malfunction, including the date(s) and time(s) and the measure(s) taken to correct the problem shall be included in the semi-annual deviation report.

V. Testing Requirements

1. Emission Testing Requirement

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

a. the emission testing shall be conducted in accordance with the Facility-wide term II.A.1 of this permit;

b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate, nitrous oxides (NOx), carbon monoxide(CO), organic compounds (OC), and hydrogen chloride (HCl);

c. the emission testing shall be conducted to demonstrate compliance with either the removal of 98 weight-percent of NMOC or the reduction of the outlet concentration of NMOC to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen;

d. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): particulate - Method 5, NOx - Method 7 or 7E, CO - Method 10, HCl - Method 26 or 26A, OC - Method 25 or 25A;

e. upon request, emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for sulfur dioxide (SO_2), by employing test method 6C; and

f. the test(s) shall be conducted while the emissions unit is operating at or near maximum capacity, unless otherwise specified or approved by the Ohio EPA, Northeast District Office.

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District

Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.

2. Compliance with the emission limitation(s) established in this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:
OC emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

b. Emission Limitation:
Visible emissions shall not exceed 10% opacity as a six-minute average.

Applicable Compliance Method:
Compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Method 9.

c. Emission Limitation:
PE shall not exceed 0.87 pound per hour, nor 3.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

d. Emission Limitation:
NOx emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

e. Emission Limitation:
CO emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year.

Applicable Compliance Method:

Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

f. Emission Limitation:
SO_2 emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

g. Emission Limitation:
HCl emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

h. Emission Limitation:
NMOC emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.

Applicable Compliance Method:
Compliance with the control efficiency limitation shall be determined in accordance with the performance test requirement of section V.1.

VI. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emission unit contained in permit to install 02-14092 as issued on December 19, 2000.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P002 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	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.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P003 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	OAC rule 3745-31-05 (A)(3)	Visible emissions shall not exceed 10% opacity as a six-minute average. Particulate emissions (PE) shall not exceed 0.87 pound per hour, nor 3.8 tons per year PM_{10} emissions shall not exceed 0.37 pound per hour, nor 1.63 tons per year Sulfur dioxide (SO_2) emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year. Organic compound (OC) emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year. Hydrogen chloride (HCl) emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 52, Section 52.21, and OAC rules 3745-31-10 through -20. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 60, Subpart WWW.
	40 CFR Part 52, Section 52.21 and	

OAC rules 3745-31-10 through -20	Carbon monoxide (CO) emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year Oxides of nitrogen (NOx) emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year
40 CFR Part 60, Subpart WWW	Non-methane organic compound (NMOC) emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.
OAC rule 3745-17-11 (B)(5)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07 (A)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-21-08(B)	See I.2.b.
OAC rule 3745-21-07(B)	See I.2.b.
OAC rule 3745-23-06(B)	See I.2.b.

2. Additional Terms and Conditions

2.a The internal combustion engine shall operate using lean burn technology.

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and the "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08(B) and 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 this permit-to-install (PTI).

2.c This internal combustion engine is one of eight (8) internal combustion engines being permitted under this PTI.

II. Operational Restrictions

1. This emissions unit shall burn only landfill gas.

2. The permittee shall install, calibrate, maintain and operate according to the manufacturer's specifications a device at the inlet to the internal combustion engine which completely shuts off gas flow to the internal combustion engine when the internal combustion engine is not operating.

3. When the internal combustion engine is not operating, the landfill gas shall be diverted to the existing enclosed combustor at the Lorain County Landfill or to an internal combustion engine that is operating. Pursuant to Lorain County Landfill's (facility ID number 02-47-00-0760) pending PTI, application number 02-17061, when the internal combustion engine is not operating, the landfill gas shall be diverted to the open flare which will replace the enclosed combustor that is to be installed pursuant to the PTI application, or to an internal combustion engine that is operating.

4. The minimum allowable temperature of the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed minimum allowable temperature has been established as 345˚C (653˚F).

5. The allowable gas flow rate to the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed maximum allowable gas flow rate has been established as 508 standard cubic feet per minute (SCFM, 70˚F and 1 atmosphere) based on a landfill gas methane content of 49%.

III. Monitoring and/or Recordkeeping Requirements

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

   a. the color of the emissions;

   b. the cause of the visible emissions;

   c. the total duration of any visible emissions incident; and,

   d. any corrective actions taken to eliminate the visible emissions.

2. In order to demonstrate ongoing compliance with the requirement to reduce NMOC emissions by 98 weight-percent or reduce the outlet NMOC emissions to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen, the permittee shall:

   a. install, calibrate, and maintain a temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of +/- 1 percent of the temperature

being measured expressed in degrees Celsius or +/- 0.5 degrees Celsius, whichever is greater.

b. install, calibrate, and maintain a device that records gas flow to or bypass of the control device. The gas flow rate measuring device shall record the flow to the control device at least every 15 minutes.

4. The permittee shall collect and record each day all 3-hour blocks of time during which the average combustion chamber temperature within the internal combustion engine was less than the allowable minimum operating temperature as established during the most recent compliance test.

5. The permittee shall collect and record each day all 3-hour blocks of time during which the average landfill gas flow rate to the internal combustion engine exceeds the maximum allowable gas flow rate as established during the most recent compliance test.

6. The permittee shall record each day when a fuel other than landfill gas was burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving the emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit deviation reports which identify the date(s) and duration the gas flow rate to the internal combustion engine exceeded the maximum gas flow rate requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall submit deviation reports which identify the date(s) and duration the combustion chamber temperature of the internal combustion engine did not meet the minimum temperature requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

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

5. Any breakdown or malfunction resulting in the emission of raw landfill gas emissions to the atmosphere shall be reported by phone to the Northeast District Office of Ohio EPA within one hour after the occurrence, or as soon as reasonably possible, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions to the atmosphere. A

summary of the breakdown or malfunction, including the date(s) and time(s) and the measure(s) taken to correct the problem shall be included in the semi-annual deviation report.

V. Testing Requirements

1. Emission Testing Requirement

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

a. the emission testing shall be conducted in accordance with the Facility-wide term II.A.1 of this permit;

b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate, nitrous oxides (NOx), carbon monoxide(CO), organic compounds (OC), and hydrogen chloride (HCl);

c. the emission testing shall be conducted to demonstrate compliance with either the removal of 98 weight-percent of NMOC or the reduction of the outlet concentration of NMOC to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen;

d. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): particulate - Method 5, NOx - Method 7 or 7E, CO - Method 10, HCl - Method 26 or 26A, OC - Method 25 or 25A;

e. upon request, emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for sulfur dioxide (SO_2), by employing test method 6C; and

f. the test(s) shall be conducted while the emissions unit is operating at or near maximum capacity, unless otherwise specified or approved by the Ohio EPA, Northeast District Office.

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District

Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.

2. Compliance with the emission limitation(s) established in this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:
OC emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

b. Emission Limitation:
Visible emissions shall not exceed 10% opacity as a six-minute average.

Applicable Compliance Method:
Compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Method 9.

c. Emission Limitation:
PE shall not exceed 0.87 pound per hour, nor 3.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

d. Emission Limitation:
NOx emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

e. Emission Limitation:
CO emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year.

Applicable Compliance Method:

Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

f. Emission Limitation:
SO_2 emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

g. Emission Limitation:
HCl emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

h. Emission Limitation:
NMOC emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.

Applicable Compliance Method:
Compliance with the control efficiency limitation shall be determined in accordance with the performance test requirement of section V.1.

VI. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emission unit contained in permit to install 02-14092 as issued on December 19, 2000.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P003 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	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.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P004 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	OAC rule 3745-31-05 (A)(3)	Visible emissions shall not exceed 10% opacity as a six-minute average. Particulate emissions (PE) shall not exceed 0.87 pound per hour, nor 3.8 tons per year PM_{10} emissions shall not exceed 0.37 pound per hour, nor 1.63 tons per year Sulfur dioxide (SO_2) emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year. Organic compound (OC) emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year. Hydrogen chloride (HCl) emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 52, Section 52.21, and OAC rules 3745-31-10 through -20. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 60, Subpart WWW.
	40 CFR Part 52, Section 52.21 and	

OAC rules 3745-31-10 through -20	Carbon monoxide (CO) emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year Oxides of nitrogen (NOx) emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year
40 CFR Part 60, Subpart WWW	Non-methane organic compound (NMOC) emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.
OAC rule 3745-17-11 (B)(5)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07 (A)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-21-08(B)	See I.2.b.
OAC rule 3745-21-07(B)	See I.2.b.
OAC rule 3745-23-06(B)	See I.2.b.

2. Additional Terms and Conditions

2.a The internal combustion engine shall operate using lean burn technology.

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and the "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08(B) and 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 this permit-to-install (PTI).

2.c This internal combustion engine is one of eight (8) internal combustion engines being permitted under this PTI.

II. Operational Restrictions

1. This emissions unit shall burn only landfill gas.

2. The permittee shall install, calibrate, maintain and operate according to the manufacturer's specifications a device at the inlet to the internal combustion engine which completely shuts off gas flow to the internal combustion engine when the internal combustion engine is not operating.

3. When the internal combustion engine is not operating, the landfill gas shall be diverted to the existing enclosed combustor at the Lorain County Landfill or to an internal combustion engine that is operating. Pursuant to Lorain County Landfill's (facility ID number 02-47-00-0760) pending PTI, application number 02-17061, when the internal combustion engine is not operating, the landfill gas shall be diverted to the open flare which will replace the enclosed combustor that is to be installed pursuant to the PTI application, or to an internal combustion engine that is operating.

4. The minimum allowable temperature of the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed minimum allowable temperature has been established as 345˚C (653˚F).

5. The allowable gas flow rate to the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed maximum allowable gas flow rate has been established as 508 standard cubic feet per minute (SCFM, 70˚F and 1 atmosphere) based on a landfill gas methane content of 49%.

III. Monitoring and/or Recordkeeping Requirements

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

   a. the color of the emissions;

   b. the cause of the visible emissions;

   c. the total duration of any visible emissions incident; and,

   d. any corrective actions taken to eliminate the visible emissions.

2. In order to demonstrate ongoing compliance with the requirement to reduce NMOC emissions by 98 weight-percent or reduce the outlet NMOC emissions to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen, the permittee shall:

   a. install, calibrate, and maintain a temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of +/- 1 percent of the temperature

being measured expressed in degrees Celsius or +/- 0.5 degrees Celsius, whichever is greater.

b. install, calibrate, and maintain a device that records gas flow to or bypass of the control device. The gas flow rate measuring device shall record the flow to the control device at least every 15 minutes.

4. The permittee shall collect and record each day all 3-hour blocks of time during which the average combustion chamber temperature within the internal combustion engine was less than the allowable minimum operating temperature as established during the most recent compliance test.

5. The permittee shall collect and record each day all 3-hour blocks of time during which the average landfill gas flow rate to the internal combustion engine exceeds the maximum allowable gas flow rate as established during the most recent compliance test.

6. The permittee shall record each day when a fuel other than landfill gas was burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving the emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit deviation reports which identify the date(s) and duration the gas flow rate to the internal combustion engine exceeded the maximum gas flow rate requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall submit deviation reports which identify the date(s) and duration the combustion chamber temperature of the internal combustion engine did not meet the minimum temperature requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

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

5. Any breakdown or malfunction resulting in the emission of raw landfill gas emissions to the atmosphere shall be reported by phone to the Northeast District Office of Ohio EPA within one hour after the occurrence, or as soon as reasonably possible, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions to the atmosphere. A

summary of the breakdown or malfunction, including the date(s) and time(s) and the measure(s) taken to correct the problem shall be included in the semi-annual deviation report.

V. Testing Requirements

1. Emission Testing Requirement

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

a. the emission testing shall be conducted in accordance with the Facility-wide term II.A.1 of this permit;

b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate, nitrous oxides (NOx), carbon monoxide(CO), organic compounds (OC), and hydrogen chloride (HCl);

c. the emission testing shall be conducted to demonstrate compliance with either the removal of 98 weight-percent of NMOC or the reduction of the outlet concentration of NMOC to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen;

d. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): particulate - Method 5, NOx - Method 7 or 7E, CO - Method 10, HCl - Method 26 or 26A, OC - Method 25 or 25A;

e. upon request, emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for sulfur dioxide (SO_2), by employing test method 6C; and

f. the test(s) shall be conducted while the emissions unit is operating at or near maximum capacity, unless otherwise specified or approved by the Ohio EPA, Northeast District Office.

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District

Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.

2. Compliance with the emission limitation(s) established in this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:
OC emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

b. Emission Limitation:
Visible emissions shall not exceed 10% opacity as a six-minute average.

Applicable Compliance Method:
Compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Method 9.

c. Emission Limitation:
PE shall not exceed 0.87 pound per hour, nor 3.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

d. Emission Limitation:
NOx emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

e. Emission Limitation:
CO emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year.

Applicable Compliance Method:

Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

f. Emission Limitation:
SO_2 emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

g. Emission Limitation:
HCl emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

h. Emission Limitation:
NMOC emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.

Applicable Compliance Method:
Compliance with the control efficiency limitation shall be determined in accordance with the performance test requirement of section V.1.

VI. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emission unit contained in permit to install 02-14092 as issued on December 19, 2000.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P004 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	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.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P005 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	OAC rule 3745-31-05 (A)(3)	Visible emissions shall not exceed 10% opacity as a six-minute average. Particulate emissions (PE) shall not exceed 0.87 pound per hour, nor 3.8 tons per year PM_{10} emissions shall not exceed 0.37 pound per hour, nor 1.63 tons per year Sulfur dioxide (SO_2) emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year. Organic compound (OC) emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year. Hydrogen chloride (HCl) emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 52, Section 52.21, and OAC rules 3745-31-10 through -20. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 60, Subpart WWW.
	40 CFR Part 52, Section 52.21 and	

OAC rules 3745-31-10 through -20	Carbon monoxide (CO) emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year Oxides of nitrogen (NOx) emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year
40 CFR Part 60, Subpart WWW	Non-methane organic compound (NMOC) emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.
OAC rule 3745-17-11 (B)(5)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07 (A)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-21-08(B)	See I.2.b.
OAC rule 3745-21-07(B)	See I.2.b.
OAC rule 3745-23-06(B)	See I.2.b.

2. Additional Terms and Conditions

2.a The internal combustion engine shall operate using lean burn technology.

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and the "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08(B) and 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 this permit-to-install (PTI).

2.c This internal combustion engine is one of eight (8) internal combustion engines being permitted under this PTI.

II. Operational Restrictions

1. This emissions unit shall burn only landfill gas.

2. The permittee shall install, calibrate, maintain and operate according to the manufacturer's specifications a device at the inlet to the internal combustion engine which completely shuts off gas flow to the internal combustion engine when the internal combustion engine is not operating.

3. When the internal combustion engine is not operating, the landfill gas shall be diverted to the existing enclosed combustor at the Lorain County Landfill or to an internal combustion engine that is operating. Pursuant to Lorain County Landfill's (facility ID number 02-47-00-0760) pending PTI, application number 02-17061, when the internal combustion engine is not operating, the landfill gas shall be diverted to the open flare which will replace the enclosed combustor that is to be installed pursuant to the PTI application, or to an internal combustion engine that is operating.

4. The minimum allowable temperature of the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed minimum allowable temperature has been established as 345˚C (653˚F).

5. The allowable gas flow rate to the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed maximum allowable gas flow rate has been established as 508 standard cubic feet per minute (SCFM, 70˚F and 1 atmosphere) based on a landfill gas methane content of 49%.

III. Monitoring and/or Recordkeeping Requirements

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

   a. the color of the emissions;

   b. the cause of the visible emissions;

   c. the total duration of any visible emissions incident; and,

   d. any corrective actions taken to eliminate the visible emissions.

2. In order to demonstrate ongoing compliance with the requirement to reduce NMOC emissions by 98 weight-percent or reduce the outlet NMOC emissions to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen, the permittee shall:

   a. install, calibrate, and maintain a temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of +/- 1 percent of the temperature

being measured expressed in degrees Celsius or +/- 0.5 degrees Celsius, whichever is greater.

b. install, calibrate, and maintain a device that records gas flow to or bypass of the control device. The gas flow rate measuring device shall record the flow to the control device at least every 15 minutes.

4. The permittee shall collect and record each day all 3-hour blocks of time during which the average combustion chamber temperature within the internal combustion engine was less than the allowable minimum operating temperature as established during the most recent compliance test.

5. The permittee shall collect and record each day all 3-hour blocks of time during which the average landfill gas flow rate to the internal combustion engine exceeds the maximum allowable gas flow rate as established during the most recent compliance test.

6. The permittee shall record each day when a fuel other than landfill gas was burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving the emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit deviation reports which identify the date(s) and duration the gas flow rate to the internal combustion engine exceeded the maximum gas flow rate requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall submit deviation reports which identify the date(s) and duration the combustion chamber temperature of the internal combustion engine did not meet the minimum temperature requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

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

5. Any breakdown or malfunction resulting in the emission of raw landfill gas emissions to the atmosphere shall be reported by phone to the Northeast District Office of Ohio EPA within one hour after the occurrence, or as soon as reasonably possible, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions to the atmosphere. A

summary of the breakdown or malfunction, including the date(s) and time(s) and the measure(s) taken to correct the problem shall be included in the semi-annual deviation report.

V. Testing Requirements

1. Emission Testing Requirement

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

a. the emission testing shall be conducted in accordance with the Facility-wide term II.A.1 of this permit;

b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate, nitrous oxides (NOx), carbon monoxide(CO), organic compounds (OC), and hydrogen chloride (HCl);

c. the emission testing shall be conducted to demonstrate compliance with either the removal of 98 weight-percent of NMOC or the reduction of the outlet concentration of NMOC to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen;

d. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): particulate - Method 5, NOx - Method 7 or 7E, CO - Method 10, HCl - Method 26 or 26A, OC - Method 25 or 25A;

e. upon request, emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for sulfur dioxide (SO_2), by employing test method 6C; and

f. the test(s) shall be conducted while the emissions unit is operating at or near maximum capacity, unless otherwise specified or approved by the Ohio EPA, Northeast District Office.

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District

Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.

2. Compliance with the emission limitation(s) established in this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:
OC emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

b. Emission Limitation:
Visible emissions shall not exceed 10% opacity as a six-minute average.

Applicable Compliance Method:
Compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Method 9.

c. Emission Limitation:
PE shall not exceed 0.87 pound per hour, nor 3.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

d. Emission Limitation:
NOx emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

e. Emission Limitation:
CO emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

f. Emission Limitation:
SO_2 emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

g. Emission Limitation:
HCl emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

h. Emission Limitation:
NMOC emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.

Applicable Compliance Method:
Compliance with the control efficiency limitation shall be determined in accordance with the performance test requirement of section V.1.

VI. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emission unit contained in permit to install 02-14092 as issued on December 19, 2000.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P005 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	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.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P006 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	OAC rule 3745-31-05 (A)(3)	Visible emissions shall not exceed 10% opacity as a six-minute average. Particulate emissions (PE) shall not exceed 0.87 pound per hour, nor 3.8 tons per year PM_{10} emissions shall not exceed 0.37 pound per hour, nor 1.63 tons per year Sulfur dioxide (SO_2) emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year. Organic compound (OC) emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year. Hydrogen chloride (HCl) emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 52, Section 52.21, and OAC rules 3745-31-10 through -20. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 60, Subpart WWW.
	40 CFR Part 52, Section 52.21 and	

OAC rules 3745-31-10 through -20	Carbon monoxide (CO) emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year Oxides of nitrogen (NOx) emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year
40 CFR Part 60, Subpart WWW	Non-methane organic compound (NMOC) emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.
OAC rule 3745-17-11 (B)(5)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07 (A)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-21-08(B)	See I.2.b.
OAC rule 3745-21-07(B)	See I.2.b.
OAC rule 3745-23-06(B)	See I.2.b.

2. Additional Terms and Conditions

2.a The internal combustion engine shall operate using lean burn technology.

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and the "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08(B) and 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 this permit-to-install (PTI).

2.c This internal combustion engine is one of eight (8) internal combustion engines being permitted under this PTI.

II. Operational Restrictions

1. This emissions unit shall burn only landfill gas.

2. The permittee shall install, calibrate, maintain and operate according to the manufacturer's specifications a device at the inlet to the internal combustion engine which completely shuts off gas flow to the internal combustion engine when the internal combustion engine is not operating.

3. When the internal combustion engine is not operating, the landfill gas shall be diverted to the existing enclosed combustor at the Lorain County Landfill or to an internal combustion engine that is operating. Pursuant to Lorain County Landfill's (facility ID number 02-47-00-0760) pending PTI, application number 02-17061, when the internal combustion engine is not operating, the landfill gas shall be diverted to the open flare which will replace the enclosed combustor that is to be installed pursuant to the PTI application, or to an internal combustion engine that is operating.

4. The minimum allowable temperature of the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed minimum allowable temperature has been established as 345˚C (653˚F).

5. The allowable gas flow rate to the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed maximum allowable gas flow rate has been established as 508 standard cubic feet per minute (SCFM, 70˚F and 1 atmosphere) based on a landfill gas methane content of 49%.

III. Monitoring and/or Recordkeeping Requirements

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

   a. the color of the emissions;

   b. the cause of the visible emissions;

   c. the total duration of any visible emissions incident; and,

   d. any corrective actions taken to eliminate the visible emissions.

2. In order to demonstrate ongoing compliance with the requirement to reduce NMOC emissions by 98 weight-percent or reduce the outlet NMOC emissions to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen, the permittee shall:

   a. install, calibrate, and maintain a temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of +/- 1 percent of the temperature

being measured expressed in degrees Celsius or +/- 0.5 degrees Celsius, whichever is greater.

b. install, calibrate, and maintain a device that records gas flow to or bypass of the control device. The gas flow rate measuring device shall record the flow to the control device at least every 15 minutes.

4. The permittee shall collect and record each day all 3-hour blocks of time during which the average combustion chamber temperature within the internal combustion engine was less than the allowable minimum operating temperature as established during the most recent compliance test.

5. The permittee shall collect and record each day all 3-hour blocks of time during which the average landfill gas flow rate to the internal combustion engine exceeds the maximum allowable gas flow rate as established during the most recent compliance test.

6. The permittee shall record each day when a fuel other than landfill gas was burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving the emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit deviation reports which identify the date(s) and duration the gas flow rate to the internal combustion engine exceeded the maximum gas flow rate requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall submit deviation reports which identify the date(s) and duration the combustion chamber temperature of the internal combustion engine did not meet the minimum temperature requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

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

5. Any breakdown or malfunction resulting in the emission of raw landfill gas emissions to the atmosphere shall be reported by phone to the Northeast District Office of Ohio EPA within one hour after the occurrence, or as soon as reasonably possible, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions to the atmosphere. A

summary of the breakdown or malfunction, including the date(s) and time(s) and the measure(s) taken to correct the problem shall be included in the semi-annual deviation report.

V. Testing Requirements

1. Emission Testing Requirement

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

a. the emission testing shall be conducted in accordance with the Facility-wide term II.A.1 of this permit;

b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate, nitrous oxides (NOx), carbon monoxide(CO), organic compounds (OC), and hydrogen chloride (HCl);

c. the emission testing shall be conducted to demonstrate compliance with either the removal of 98 weight-percent of NMOC or the reduction of the outlet concentration of NMOC to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen;

d. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): particulate - Method 5, NOx - Method 7 or 7E, CO - Method 10, HCl - Method 26 or 26A, OC - Method 25 or 25A;

e. upon request, emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for sulfur dioxide (SO_2), by employing test method 6C; and

f. the test(s) shall be conducted while the emissions unit is operating at or near maximum capacity, unless otherwise specified or approved by the Ohio EPA, Northeast District Office.

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District

Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.

2. Compliance with the emission limitation(s) established in this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:
OC emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

b. Emission Limitation:
Visible emissions shall not exceed 10% opacity as a six-minute average.

Applicable Compliance Method:
Compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Method 9.

c. Emission Limitation:
PE shall not exceed 0.87 pound per hour, nor 3.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

d. Emission Limitation:
NOx emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

e. Emission Limitation:
CO emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year.

Applicable Compliance Method:

Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

f. Emission Limitation:
SO_2 emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

g. Emission Limitation:
HCl emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

h. Emission Limitation:
NMOC emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.

Applicable Compliance Method:
Compliance with the control efficiency limitation shall be determined in accordance with the performance test requirement of section V.1.

VI. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emission unit contained in permit to install 02-14092 as issued on December 19, 2000.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P006 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	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.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P007 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	OAC rule 3745-31-05 (A)(3)	Visible emissions shall not exceed 10% opacity as a six-minute average. Particulate emissions (PE) shall not exceed 0.87 pound per hour, nor 3.8 tons per year PM_{10} emissions shall not exceed 0.37 pound per hour, nor 1.63 tons per year Sulfur dioxide (SO_2) emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year. Organic compound (OC) emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year. Hydrogen chloride (HCl) emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 52, Section 52.21, and OAC rules 3745-31-10 through -20. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 60, Subpart WWW.
	40 CFR Part 52, Section 52.21 and	

OAC rules 3745-31-10 through -20	Carbon monoxide (CO) emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year Oxides of nitrogen (NOx) emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year
40 CFR Part 60, Subpart WWW	Non-methane organic compound (NMOC) emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.
OAC rule 3745-17-11 (B)(5)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07 (A)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-21-08(B)	See I.2.b.
OAC rule 3745-21-07(B)	See I.2.b.
OAC rule 3745-23-06(B)	See I.2.b.

2. Additional Terms and Conditions

2.a The internal combustion engine shall operate using lean burn technology.

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and the "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08(B) and 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 this permit-to-install (PTI).

2.c This internal combustion engine is one of eight (8) internal combustion engines being permitted under this PTI.

II. Operational Restrictions

1. This emissions unit shall burn only landfill gas.

2. The permittee shall install, calibrate, maintain and operate according to the manufacturer's specifications a device at the inlet to the internal combustion engine which completely shuts off gas flow to the internal combustion engine when the internal combustion engine is not operating.

3. When the internal combustion engine is not operating, the landfill gas shall be diverted to the existing enclosed combustor at the Lorain County Landfill or to an internal combustion engine that is operating. Pursuant to Lorain County Landfill's (facility ID number 02-47-00-0760) pending PTI, application number 02-17061, when the internal combustion engine is not operating, the landfill gas shall be diverted to the open flare which will replace the enclosed combustor that is to be installed pursuant to the PTI application, or to an internal combustion engine that is operating.

4. The minimum allowable temperature of the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed minimum allowable temperature has been established as 345˚C (653˚F).

5. The allowable gas flow rate to the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed maximum allowable gas flow rate has been established as 508 standard cubic feet per minute (SCFM, 70˚F and 1 atmosphere) based on a landfill gas methane content of 49%.

III. Monitoring and/or Recordkeeping Requirements

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

   a. the color of the emissions;

   b. the cause of the visible emissions;

   c. the total duration of any visible emissions incident; and,

   d. any corrective actions taken to eliminate the visible emissions.

2. In order to demonstrate ongoing compliance with the requirement to reduce NMOC emissions by 98 weight-percent or reduce the outlet NMOC emissions to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen, the permittee shall:

   a. install, calibrate, and maintain a temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of +/- 1 percent of the temperature

being measured expressed in degrees Celsius or +/- 0.5 degrees Celsius, whichever is greater.

b. install, calibrate, and maintain a device that records gas flow to or bypass of the control device. The gas flow rate measuring device shall record the flow to the control device at least every 15 minutes.

4. The permittee shall collect and record each day all 3-hour blocks of time during which the average combustion chamber temperature within the internal combustion engine was less than the allowable minimum operating temperature as established during the most recent compliance test.

5. The permittee shall collect and record each day all 3-hour blocks of time during which the average landfill gas flow rate to the internal combustion engine exceeds the maximum allowable gas flow rate as established during the most recent compliance test.

6. The permittee shall record each day when a fuel other than landfill gas was burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving the emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit deviation reports which identify the date(s) and duration the gas flow rate to the internal combustion engine exceeded the maximum gas flow rate requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall submit deviation reports which identify the date(s) and duration the combustion chamber temperature of the internal combustion engine did not meet the minimum temperature requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

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

5. Any breakdown or malfunction resulting in the emission of raw landfill gas emissions to the atmosphere shall be reported by phone to the Northeast District Office of Ohio EPA within one hour after the occurrence, or as soon as reasonably possible, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions to the atmosphere. A

summary of the breakdown or malfunction, including the date(s) and time(s) and the measure(s) taken to correct the problem shall be included in the semi-annual deviation report.

V. Testing Requirements

1. Emission Testing Requirement

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

a. the emission testing shall be conducted in accordance with the Facility-wide term II.A.1 of this permit;

b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate, nitrous oxides (NOx), carbon monoxide(CO), organic compounds (OC), and hydrogen chloride (HCl);

c. the emission testing shall be conducted to demonstrate compliance with either the removal of 98 weight-percent of NMOC or the reduction of the outlet concentration of NMOC to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen;

d. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): particulate - Method 5, NOx - Method 7 or 7E, CO - Method 10, HCl - Method 26 or 26A, OC - Method 25 or 25A;

e. upon request, emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for sulfur dioxide (SO_2), by employing test method 6C; and

f. the test(s) shall be conducted while the emissions unit is operating at or near maximum capacity, unless otherwise specified or approved by the Ohio EPA, Northeast District Office.

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District

Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.

2. Compliance with the emission limitation(s) established in this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:
OC emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

b. Emission Limitation:
Visible emissions shall not exceed 10% opacity as a six-minute average.

Applicable Compliance Method:
Compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Method 9.

c. Emission Limitation:
PE shall not exceed 0.87 pound per hour, nor 3.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

d. Emission Limitation:
NOx emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

e. Emission Limitation:
CO emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

f. Emission Limitation:
SO_2 emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

g. Emission Limitation:
HCl emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

h. Emission Limitation:
NMOC emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.

Applicable Compliance Method:
Compliance with the control efficiency limitation shall be determined in accordance with the performance test requirement of section V.1.

VI. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emission unit contained in permit to install 02-14092 as issued on December 19, 2000.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P007 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	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.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P008 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	OAC rule 3745-31-05 (A)(3)	Visible emissions shall not exceed 10% opacity as a six-minute average. Particulate emissions (PE) shall not exceed 0.87 pound per hour, nor 3.8 tons per year PM_{10} emissions shall not exceed 0.37 pound per hour, nor 1.63 tons per year Sulfur dioxide (SO_2) emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year. Organic compound (OC) emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year. Hydrogen chloride (HCl) emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 52, Section 52.21, and OAC rules 3745-31-10 through -20. Compliance with this rule also includes compliance with the requirements of 40 CFR Part 60, Subpart WWW.
	40 CFR Part 52, Section 52.21 and	

OAC rules 3745-31-10 through -20	Carbon monoxide (CO) emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year Oxides of nitrogen (NOx) emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year
40 CFR Part 60, Subpart WWW	Non-methane organic compound (NMOC) emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.
OAC rule 3745-17-11 (B)(5)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07 (A)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-21-08(B)	See I.2.b.
OAC rule 3745-21-07(B)	See I.2.b.
OAC rule 3745-23-06(B)	See I.2.b.

2. Additional Terms and Conditions

2.a The internal combustion engine shall operate using lean burn technology.

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and the "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08(B) and 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 this permit-to-install (PTI).

2.c This internal combustion engine is one of eight (8) internal combustion engines being permitted under this PTI.

II. Operational Restrictions

1. This emissions unit shall burn only landfill gas.

2. The permittee shall install, calibrate, maintain and operate according to the manufacturer's specifications a device at the inlet to the internal combustion engine which completely shuts off gas flow to the internal combustion engine when the internal combustion engine is not operating.

3. When the internal combustion engine is not operating, the landfill gas shall be diverted to the existing enclosed combustor at the Lorain County Landfill or to an internal combustion engine that is operating. Pursuant to Lorain County Landfill's (facility ID number 02-47-00-0760) pending PTI, application number 02-17061, when the internal combustion engine is not operating, the landfill gas shall be diverted to the open flare which will replace the enclosed combustor that is to be installed pursuant to the PTI application, or to an internal combustion engine that is operating.

4. The minimum allowable temperature of the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed minimum allowable temperature has been established as 345˚C (653˚F).

5. The allowable gas flow rate to the internal combustion engine's combustion chamber shall be determined during the most recent compliance test. Currently, the assumed maximum allowable gas flow rate has been established as 508 standard cubic feet per minute (SCFM, 70˚F and 1 atmosphere) based on a landfill gas methane content of 49%.

III. Monitoring and/or Recordkeeping Requirements

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

   a. the color of the emissions;

   b. the cause of the visible emissions;

   c. the total duration of any visible emissions incident; and,

   d. any corrective actions taken to eliminate the visible emissions.

2. In order to demonstrate ongoing compliance with the requirement to reduce NMOC emissions by 98 weight-percent or reduce the outlet NMOC emissions to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen, the permittee shall:

   a. install, calibrate, and maintain a temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of +/- 1 percent of the temperature

being measured expressed in degrees Celsius or +/- 0.5 degrees Celsius, whichever is greater.

b. install, calibrate, and maintain a device that records gas flow to or bypass of the control device. The gas flow rate measuring device shall record the flow to the control device at least every 15 minutes.

4. The permittee shall collect and record each day all 3-hour blocks of time during which the average combustion chamber temperature within the internal combustion engine was less than the allowable minimum operating temperature as established during the most recent compliance test.

5. The permittee shall collect and record each day all 3-hour blocks of time during which the average landfill gas flow rate to the internal combustion engine exceeds the maximum allowable gas flow rate as established during the most recent compliance test.

6. The permittee shall record each day when a fuel other than landfill gas was burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving the emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit deviation reports which identify the date(s) and duration the gas flow rate to the internal combustion engine exceeded the maximum gas flow rate requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall submit deviation reports which identify the date(s) and duration the combustion chamber temperature of the internal combustion engine did not meet the minimum temperature requirements, as established during the most recent compliance stack test, as a three-hour average. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

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

5. Any breakdown or malfunction resulting in the emission of raw landfill gas emissions to the atmosphere shall be reported by phone to the Northeast District Office of Ohio EPA within one hour after the occurrence, or as soon as reasonably possible, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions to the atmosphere. A

summary of the breakdown or malfunction, including the date(s) and time(s) and the measure(s) taken to correct the problem shall be included in the semi-annual deviation report.

V. Testing Requirements

1. Emission Testing Requirement

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

a. the emission testing shall be conducted in accordance with the Facility-wide term II.A.1 of this permit;

b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate, nitrous oxides (NOx), carbon monoxide(CO), organic compounds (OC), and hydrogen chloride (HCl);

c. the emission testing shall be conducted to demonstrate compliance with either the removal of 98 weight-percent of NMOC or the reduction of the outlet concentration of NMOC to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen;

d. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): particulate - Method 5, NOx - Method 7 or 7E, CO - Method 10, HCl - Method 26 or 26A, OC - Method 25 or 25A;

e. upon request, emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for sulfur dioxide (SO_2), by employing test method 6C; and

f. the test(s) shall be conducted while the emissions unit is operating at or near maximum capacity, unless otherwise specified or approved by the Ohio EPA, Northeast District Office.

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District

Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.

2. Compliance with the emission limitation(s) established in this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:
OC emissions shall not exceed 0.68 pound per hour, nor 3.0 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

b. Emission Limitation:
Visible emissions shall not exceed 10% opacity as a six-minute average.

Applicable Compliance Method:
Compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Method 9.

c. Emission Limitation:
PE shall not exceed 0.87 pound per hour, nor 3.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

d. Emission Limitation:
NOx emissions shall not exceed 5.88 pounds per hour, 0.42 lb/MMBtu, nor 25.8 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

e. Emission Limitation:
CO emissions shall not exceed 9.76 pounds per hour, 0.70 lb/MMBtu, nor 42.75 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission and technical limitations shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

f. Emission Limitation:
SO_2 emissions shall not exceed 0.20 pound per hour, nor 0.9 ton per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

g. Emission Limitation:
HCl emissions shall not exceed 0.28 pound per hour, nor 1.24 tons per year.

Applicable Compliance Method:
Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirement. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton).

h. Emission Limitation:
NMOC emissions shall be reduced by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.

Applicable Compliance Method:
Compliance with the control efficiency limitation shall be determined in accordance with the performance test requirement of section V.1.

VI. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emission unit contained in permit to install 02-14092 as issued on December 19, 2000.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P008 - 1400 bkW (14.0 million Btu/hr) Deutz TBG 620 V16 K Internal combustion engine #1 to produce electricity from landfill gas. Using lean burn technology to meet best available control technology (BACT) requirements.	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.