



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL CERTIFIED MAIL  
MAHONING COUNTY**

Street Address:

122 S. Front Street

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

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 02-13533**

**DATE: 2/16/00**

CLD Landfill, LFG Power Station  
Leslie Cook  
7700 San Felipe St, Ste 480  
Houston, TX 770631613

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,

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

CC: USEPA

NEDO



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install

Issue Date: 2/16/00

**FINAL PERMIT TO INSTALL 02-13533**

Application Number: 02-13533  
APS Premise Number: 0250000987  
Permit Fee: **\$1200**  
Name of Facility: CLD Landfill, LFG Power Station  
Person to Contact: Leslie Cook  
Address: 7700 San Felipe St, Ste 480  
Houston, TX 770631613

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

**9960 S Range Rd  
Salem, Ohio**

Description of proposed emissions unit(s):

**Three 14.0 mmBtu/Hr internal combustion engines for electricity production burning landfill gas.**

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency



Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. Permit to Install General Terms and Conditions

#### 1. Compliance Requirements

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

#### 2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

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

#### 3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

#### 4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**6. Permit Transfers**

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

**7. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

**8. Termination of Permit to Install**

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**9. Construction of New Sources(s)**

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio

Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities prove to be inadequate or cannot meet applicable standards.

#### **10. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

#### **11. Applicability**

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit to Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

#### **12. Best Available Technology**

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

#### **13. Source Operation and Operating Permit Requirements After Completion of Construction**

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

#### **14. Construction Compliance Certification**

**CLD Landfill, LFG Power Station**  
**PTI Application: 02-13533**  
**Issued: 2/16/00**

**Facility ID: 0250000987**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

**15. Fees**

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

**B. Permit to Install Summary of Allowable Emissions**

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
Nitrogen Oxide	76.8
Carbon Monoxide	80.1
Organic Compounds	9.0
Sulfur Dioxide	2.7
Particulate Matter	11.41

CLD Landfill, LFG Power Station  
PTI Application: 02-12522  
Issued

Facility ID: 0250000987

Emissions Unit ID: P001

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
14.0 million Btu/hr Deutz TBG 620 V16 K Internal Combustion Engine #1 to produce electricity from landfill gas.	OAC rule 3745-17-11(B)(5)
	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07
	OAC rule 3745-18-06

**CLD 1**

**PTI A**

**Issued: 2/16/00**

Emissions Unit ID: **P001**

Applicable Emissions  
Limitations/Control Measures

Non-methane organic compounds emissions shall be reduced by 98 percent, by weight.

Visible emission shall not exceed 10% opacity as a six-minute average.

Particulate matter emissions shall not exceed 0.062 pound per mmBtu, actual heat input (0.87 pound per hour; 3.8 tons per year).

Nitrogen Oxide emissions shall not exceed 0.41 pound per mmBtu, actual heat input (5.84 pounds per hour; 25.6 tons per year).

Carbon Monoxide emissions shall not exceed 0.44 pound per mmBtu, actual heat input (6.09 pounds per hour; 26.7 tons per year).

Sulfur Dioxide emissions shall not exceed 0.20 pound per hour; 0.9 ton per year.

Organic Compound emissions shall not exceed 0.68 pound per hour; 3.0 tons per year.

Equivalent to the limit established by OAC rule 3745-31-05.

Less stringent than the limit established by OAC rule

3745-31-05.

Less stringent than the limit established by OAC rule 3745-31-05.

**2. Additional Terms and Conditions**

**2.a** None

**B. 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 CLD/Salem Landfill.

**C. 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 matter 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 operation log:
  - a. the color of the emissions;
  - b. the cause of the visible emissions;
  - c. the total duration of any visible emission incident; and,
  - d. any corrective actions taken to eliminate the visible emissions.

**D. 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 the Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

**E. 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 within 90 days from start-up of the emission unit;
- b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate matter (PM), nitrogen oxide (NO<sub>x</sub>), carbon monoxide (CO), organic compounds (OC), and the control of 98 percent removal, by weight, of NMOC.
- c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): PM - Method 5, NO<sub>x</sub> - Method 7 or 7E, CO - Method 10, and OC - Method 25 or 25A.
- d. 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 the 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.

**CLD Landfill, LFG Power Station**

**PTI Application: 02-12522**

**Issued**

**Facility ID: 0250000987**

**Emissions Unit ID: P001**

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).

2. Compliance with the emission limitation(s) established in this permit shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
Organic Compound emissions shall not exceed 0.68 pound per hour; 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 8760 (hours per year) and divided by 2000 (pounds per ton).
  - b. Emission Limitation:  
Visible emission 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:  
Particulate matter emissions shall not exceed 0.062 pound per mmBtu, actual heat input (0.87 pound per hour; 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 8760 (hours per year) and divided by 2000 (pounds per ton).
  - d. Emission Limitation:  
Nitrogen Oxide emissions shall not exceed 0.41 pound per mmBtu, actual heat input (5.84 pounds per hour; 25.6 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 8760 (hours per year) and divided by 2000 (pounds per ton).
  - e. Emission Limitation:

Carbon Monoxide emissions shall not exceed 0.44 pound per mmBtu, actual heat input (6.09 pounds per hour; 26.7 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 8760 (hours per year) and divided by 2000 (pounds per ton).

- f. Emission Limitation:  
Sulfur Dioxide emissions shall not exceed 0.20 pound per hour; 0.9 ton per year.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated by multiplying the maximum inlet gas flow of 0.26 MMscf per hour by an AP-42 emission factor of 7.786 pound per Mmscf, (Section 2.4 "Municipal Solid Waste Landfills, 11/98). Compliance with the annual limitation is based on the hourly emission rate multiplied by 8760 (hours per year) and divided by 2000 (pounds per ton).

- g. Emission Limitation:  
non-methane organic compound emissions shall be reduced by 98% by weight

Applicable Compliance Method:

Compliance with the control efficiency limitation shall be determined in accordance with the performance test requirement of section E.1.

## **F. Miscellaneous Requirements**

None

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
14.0 million Btu/hr Deutz TBG 620 V16 K Internal Combustion Engine #2 for electricity production from landfill gas.	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-11(B)(5)
		OAC rule 3745-17-07
		OAC rule 3745-18-06

**CLD 1**

**PTI A**

**Issued: 2/16/00**

Emissions Unit ID: **P002**

Applicable Emissions Limitations/Control Measures	established by OAC rule 3745-31-05.
Non-methane organic compounds emissions shall be reduced by 98 percent, by weight.	Less stringent than the limit established by OAC rule 3745-31-05.
Visible emission shall not exceed 10% opacity as a six-minute average.	
Particulate matter emissions shall not exceed 0.062 pound per mmBtu, actual heat input (0.87 pound per hour; 3.80 tons per year).	
Nitrogen Oxide emissions shall not exceed 0.41 pound per mmBtu, actual heat input (5.84 pounds per hour; 25.6 tons per year).	
Carbon Monoxide emissions shall not exceed 0.44 pound per mmBtu, actual heat input (6.09 pounds per hour; 26.7 tons per year).	
Sulfur Dioxide emissions shall not exceed 0.20 pound per hour; 0.9 ton per year.	
Organic Compound emissions shall not exceed 0.68 pound per hour; 3.0 tons per year.	
Equivalent to the limit established by OAC rule 3745-31-05.	
Less stringent than the limit	

**2. Additional Terms and Conditions**

2.a None

**B. 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 CLD/Salem Landfill.

**C. 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 matter 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 operation log:
  - a. the color of the emissions;
  - b. the cause of the visible emissions;
  - c. the total duration of any visible emission incident; and,
  - d. any corrective actions taken to eliminate the visible emissions.

**D. 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 the Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

**E. 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 within 90 days from start-up of the emission unit;
- b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate matter (PM), nitrogen oxide (NO<sub>x</sub>), carbon monoxide (CO), organic compounds (OC), and 98 percent removal, by weight, of NMOC
- c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): PM - Method 5, NO<sub>x</sub> - Method 7 or 7E, CO - Method 10, and OC - Method 25 or 25A.
- d. 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 the 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).

2. Compliance with the emission limitation(s) established in this permit shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
Organic Compound emissions shall not exceed 0.68 pound per hour; 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 8760 (hours per year) and divided by 2000 (pounds per ton).
  - b. Emission Limitation:  
Visible emission 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:  
Particulate matter emissions shall not exceed 0.062 pound per mmBtu, actual heat input (0.87 pound per hour; 3.80 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 8760 (hours per year) and divided by 2000 (pounds per ton).
  - d. Emission Limitation:  
Nitrogen Oxide emissions shall not exceed 0.41 pound per mmBtu, actual heat input (5.84 pounds per hour; 25.6 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 8760 (hours per year) and divided by 2000 (pounds per

ton).

- e. **Emission Limitation:**  
Carbon Monoxide emissions shall not exceed 0.44 pound per mmBtu, actual heat input (6.09 pounds per hour; 26.7 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 8760 (hours per year) and divided by 2000 (pounds per ton).

- f. Emission Limitation:  
Sulfur Dioxide emissions shall not exceed 0.20 pound per hour; 0.9 ton per year.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated by multiplying the maximum inlet gas flow of 0.26 MMscf per hour by an AP-42 emission factor of 7.786 pound per MMscf. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8760 (hours per year) and divided by 2000 (pounds per ton).

- g. Emission Limitation:  
non-methane organic compound emissions shall be reduced by 98% by weight

Applicable Compliance Method:

Compliance with the control efficiency limitation shall be determined in accordance with the performance test requirement of section E.1.

**F. Miscellaneous Requirements**

None

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
14.0 million Btu/hr Deutz TBG 620 V16 K Internal Combustion Engine #3 for electricity production from landfill gas.	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-11(B)(5)
		OAC rule 3745-17-07
		OAC rule 3745-18-06

**CLD 1**

**PTI A**

**Issued: 2/16/00**

Emissions Unit ID: **P003**

<p>Applicable Emissions</p>	<p>3745-31-05.</p>
<p><u>Limitations/Control Measures</u></p>	<p>Less stringent than the limit established by OAC rule</p>
<p>Non-methane organic compounds emissions shall be reduced by 98 percent, by weight.</p>	<p>3745-31-05.</p>
<p>Visible emission shall not exceed 10% opacity as a six-minute average.</p>	
<p>Particulate matter emissions shall not exceed 0.062 pound per mmBtu, actual heat input (0.87 pound per hour; 3.8 tons per year).</p>	
<p>Nitrogen Oxide emissions shall not exceed 0.41 pound per mmBtu, actual heat input (5.84 pounds per hour; 25.6 tons per year).</p>	
<p>Carbon Monoxide emissions shall not exceed 0.44 pound per mmBtu, actual heat input (6.09 pounds per hour; 26.7 tons per year).</p>	
<p>Sulfur Dioxide emissions shall not exceed 0.20 pound per hour; 0.9 ton per year.</p>	
<p>Organic Compound emissions shall not exceed 0.68 pound per hour; 3.0 tons per year.</p>	
<p>Equivalent to the limit established by OAC rule 3745-31-05.</p>	
<p>Less stringent than the limit established by OAC rule</p>	

**2. Additional Terms and Conditions**

2.a None

**B. 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 CLD/Salem Landfill.

**C. 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 matter 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 operation log:
  - a. the color of the emissions;
  - b. the cause of the visible emissions;
  - c. the total duration of any visible emission incident; and,
  - d. any corrective actions taken to eliminate the visible emissions.

**D. 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 the Ohio EPA by January 31 and July 31 of each year and shall cover the previous 6-month period.

**E. 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 within 90 days from start-up of the emission unit;
- b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate matter (PM), nitrogen oxide (NO<sub>x</sub>), carbon monoxide (CO), organic compounds (OC), and 98 percent reduction, by weight, of NMOC;
- c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): PM - Method 5, NO<sub>x</sub> - Method 7 or 7E, CO - Method 10, and OC - Method 25 or 25A.
- d. 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 the 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).

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

- a. Emission Limitation:  
Organic Compound emissions shall not exceed 0.68 pound per hour; 3.0 tons per year.

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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 8760 (hours per year) and divided by 2000 (pounds per ton).

- b. Emission Limitation:  
Visible emission 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:  
Particulate matter emissions shall not exceed 0.062 pound per mmBtu, actual heat input (0.87 pound per hour; 3.80 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 8760 (hours per year) and divided by 2000 (pounds per ton).

- d. Emission Limitation:  
Nitrogen Oxide emissions shall not exceed 0.41 pound per mmBtu, actual heat input (5.84 pounds per hour; 25.6 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 8760 (hours per year) and divided by 2000 (pounds per ton).

- e. Emission Limitation:  
Carbon Monoxide emissions shall not exceed 0.44 pound per mmBtu, actual heat input (6.09 pounds per hour; 26.7 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 8760 (hours per year) and divided by 2000 (pounds per

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ton).

- f. Emission Limitation:  
Sulfur Dioxide emissions shall not exceed 0.20 pound per hour; 0.9 ton per year.

**CLD Landfill, LFG Power Station**

**PTI Application: 02-12522**

**Issued**

**Facility ID: 0250000987**

**Emissions Unit ID: P003**

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated by multiplying the maximum inlet gas flow of 0.26 MMscf per hour by an AP-42 emission factor of 7.786 pound per MMscf. Compliance with the annual limitation is based on the hourly emission rate multiplied by 8760 (hours per year) and divided by 2000 (pounds per ton).

- g. Emission Limitation:  
non-methane organic compound emissions shall be reduced by 98% by weight

Applicable Compliance Method:

Compliance with the control efficiency limitation shall be determined in accordance with the performance test requirement of section E.1.

#### **F. Miscellaneous Requirements**

None