



Environmental
Protection Agency

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

1/5/2011

Certified Mail

Liza Mireles
Ottawa County Landfill Gas Power Station
16360 Park Ten Place, Suite 218
Houston, TX 77084

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0362010127
Permit Number: P0107159
Permit Type: Initial Installation
County: Ottawa

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 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. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Kevin Boyce," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

The Ohio EPA is encouraging 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 Compliance Assistance and Pollution Prevention at (614) 644-3469. If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Northwest District Office. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA
Ohio EPA-NWDO; Michigan; Canada



FINAL

Division of Air Pollution Control
Permit-to-Install
for
Ottawa County Landfill Gas Power Station

Facility ID: 0362010127
Permit Number: P0107159
Permit Type: Initial Installation
Issued: 1/5/2011
Effective: 1/5/2011



Division of Air Pollution Control
Permit-to-Install
for
Ottawa County Landfill Gas Power Station

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Authorization

Facility ID: 0362010127
Facility Description: Electric Services
Application Number(s): A0040662
Permit Number: P0107159
Permit Description: Initial installation permit for a landfill gas treatment system with thermal oxidizer
Permit Type: Initial Installation
Permit Fee: \$200.00
Issue Date: 1/5/2011
Effective Date: 1/5/2011

This document constitutes issuance to:

Ottawa County Landfill Gas Power Station
530 North Camp Road
Port Clinton, OH 43452-9599

of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section 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 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

Chris Korleski
Director



Authorization (continued)

Permit Number: P0107159

Permit Description: Initial installation permit for a landfill gas treatment system with thermal oxidizer

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:

P004

Company Equipment ID:

landfill gas treatment system with thermal oxidizer

Superseded Permit Number:

General Permit Category and Type: Not Applicable

A. Standard Terms and Conditions



1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) 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.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they 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 and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. 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 re-issuance, or modification.

- 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, 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 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.

4. Monitoring and Related Record Keeping 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:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) 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:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.

- (2) 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 Ohio EPA DAPC, Northwest District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Ohio EPA DAPC, Northwest District Office every six months, 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.
 - (4) This permit is for an emissions unit located at a Title V facility. 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.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

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, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Northwest District Office 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).

6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) 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.
- c) 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:

- (1) 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.
 - (2) 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.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) 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.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, Northwest District Office 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:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) 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.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. 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.

9. 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 Ohio EPA DAPC, Northwest District Office.

- 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 Ohio EPA DAPC, Northwest District Office. 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 (i.e., postmarked) quarterly, 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.)

10. 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).

11. Construction of New Sources(s) and Authorization to Install

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. 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 this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit 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.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. 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.

- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

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).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.



- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. 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.

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

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., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. 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 any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. 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.

19. 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.

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.

C. Emissions Unit Terms and Conditions



1. P004, landfill gas treatment system with thermal oxidizer

Operations, Property and/or Equipment Description:

landfill gas treatment system with thermal oxidizer

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	0.08 lb nitrogen oxides (NO _x)/mmBtu, 0.19 lb NO _x /hour and 0.83 ton NO _x /yr 0.20 lb carbon monoxide (CO)/mmBtu, 0.48 lb CO/hr and 2.1 tons CO/yr 0.04 lb particulate matter less than ten microns in size (PM ₁₀)/hr and 0.18 ton PM ₁₀ /yr 0.0029 lb non-methane organic compounds (NMOC)/hr and 0.013 ton NMOC/yr 2.06 lbs methane (CH ₄)/hr and 9.02 tons CH ₄ /yr Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average, from the stack. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3), as effective 12/01/2006	See b)(2)b.
c.	40 CFR, Part 60, Subpart WWW	See b)(2)c.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirements to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

- b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the OC, NO_x, CO and PM₁₀ emissions from this air contaminant source since the uncontrolled potential to emit for OC, NO_x, CO and PM₁₀ is less than 10 tons/yr.

BAT requirements under OAC rule 3745-31-05(A)(3), as effective December 1, 2006, are not applicable to the NMOC and CH₄ emitted from this emissions unit. BAT is only applicable to emissions of an air contaminant or precursor of an air contaminant for which a national ambient air quality standard (NAAQS) has been adopted under the Clean Air Act. NMOCs that are not VOCs and CH₄ are air contaminants that do not involve an established NAAQS.

- c. To demonstrate compliance with this rule, the permittee is routing the collected gas to a treatment system that processes the collected gas for subsequent sale or use pursuant to 40 CFR 60.752(b)(2)(iii)(C). All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of 40 CFR 60.752(b)(2)(iii)(A) or (B). The permittee has chosen to comply with 40 CFR 60.752(b)(2)(iii)(B) by using a control system that shall be designed and operated to reduce NMOC by 98 percent, or when an enclosed combustion device is used for control, to either reduce NMOC by 98 percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen.

c) Operational Restrictions

- (1) The permittee has committed to compressing, filtering for particles up to 10 microns in diameter and dewatering the landfill gas (LFG) before it is processed through this emissions unit. Dewatering shall be defined as a reduction of the dew point of the LFG by at least 20 degrees Fahrenheit.
- (2) All of the emissions from the siloxane filter system shall be vented to a thermal oxidizer that shall meet the operational, monitoring, and record keeping requirements of this permit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall install, calibrate and maintain a continuous device that monitors and records the temperature of the LFG prior to dewatering and after dewatering.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the filtration system when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable pressure drop shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range is established to demonstrate compliance.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the filtration system is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall install, calibrate, maintain and operate according to the manufacturer's specifications devices on piping to the thermal oxidizer which completely shuts off gas flow to the thermal oxidizer when the thermal oxidizer is not operating.
- (4) In order to maintain compliance with the applicable emission limitation contained in this permit, the acceptable combustion temperature within the thermal oxidizer, during any period of time when the emissions unit controlled by the thermal oxidizer is in operation, shall not be less than 1400 degrees Fahrenheit.
- (5) The permittee shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment.
 - a. 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. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit is in operation:
 - i. all time periods, except during start-up and shut-down, during which the emissions unit was in operation and the thermal oxidizer inlet temperature was below the acceptable minimum.
 - ii. a log (date and total time) of the downtime or bypass of the capture (collection) system (serving the thermal oxidizer) and the thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
 - b. A device that records flow to or bypass of the control device. The permittee shall either:
 - i. Install, calibrate, and maintain a gas flow rate measuring device that shall record the LFG flow to the control device at least every 15 minutes; or

- ii. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.
- (6) The permittee shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines.
- (7) Whenever the monitored combustion temperature within the thermal oxidizer drops below the minimum operating temperature, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:
- a. the date and time the deviation began;
 - b. the magnitude of the deviation at that time;
 - c. the date the investigation was conducted;
 - d. the name(s) of the personnel who conducted the investigation; and,
 - e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the temperature readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA, Northeast

District Office. The permittee may request revisions to the permitted temperature range/limit. In addition; approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of administrative modification.

e) Reporting Requirements

(1) The permittee shall submit quarterly summaries of the following records:

- a. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the range established in this permit;
- b. any period of time (start time and date, and end time and date) when the siloxane filter system was in operation and the process emissions were not vented to the thermal oxidizer;
- c. each incident of deviation described in e)(1)a. or e)(1)b. (above) where a prompt investigation was not conducted;
- d. each incident of deviation described in e)(1)a. or e)(1)b. where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken; and
- e. each incident of deviation described in e)(1)a. or e)(1)b. where proper records were not maintained for the investigation and/or the corrective action(s).

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

(2) The permittee shall submit quarterly summaries of the following records:

- a. each period of time (start time and date, and end time and date) when the pressure drop across the filtration system was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;
- b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the filtration system;
- c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;
- d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
- e. each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

- (3) The permittee shall submit semiannual reports to the Ohio EPA, Northwest District Office, which identify the date(s) and duration when the temperature after dewatering exceeded the temperature prior to dewatering by less than 20 degrees Fahrenheit. These reports shall be submitted by January 31, and July 31, and shall cover the records for the previous calendar six months.
 - (4) The permittee shall submit semiannual reports to the Ohio EPA, Northwest District Office, which identify the date(s) and duration when the pressure drop across the filtration system was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration. These reports shall be submitted by January 31, and July 31, and shall cover the records for the previous calendar six months.
 - (5) Any breakdown or malfunction resulting in the emission of raw landfill gas (LFG) to the atmosphere shall be reported by telephone to the Northeast District Office of the Ohio EPA within one hour after the occurrence, or as soon as reasonably possible, and immediate remedial actions 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.
- f) Testing Requirements
- (1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitations: 0.08 lb NO_x/mmBtu and 0.19 lb NO_x/hr
Applicable Compliance Method: The emission limitation of 0.08 lb NO_x/mmBtu was an emission factor supplied by the manufacturer. Compliance with the hourly NO_x emission limitation shall be determined by the following formula:
$$0.08 \text{ lb NO}_x/\text{mmBtu} \times 2.4 \text{ mmBtu/hr} = 0.19 \text{ lb NO}_x/\text{hr}$$

If required, compliance shall be demonstrated by using Methods 1 – 4 and 7 of 40 CFR, Part 60, Appendix A.
 - b. Emission Limitation: 0.83 ton NO_x/yr
Applicable Compliance Method: The annual NO_x emission limitation was established by multiplying the hourly limitation by the maximum operating schedule of 8,760 hours/year and then dividing by 2,000 pounds/ton. Therefore, provided compliance is demonstrated with the hourly limitation, compliance with the annual limitation shall also be demonstrated.
 - c. Emission Limitations: 0.20 lb CO/mmBtu and 0.48 lb CO/hr
Applicable Compliance Method: The emission limitation of 0.20 lb CO/mmBtu was an emission factor supplied by the manufacturer. Compliance with the hourly CO emission limitation shall be determined by the following formula:

$$0.20 \text{ lb CO/mmBtu} \times 2.4 \text{ mmBtu/hr} = 0.48 \text{ lb/hr}$$

If required, compliance shall be demonstrated by using Methods 1 – 4 and 10 of 40 CFR, Part 60, Appendix A.

- d. Emission Limitation: 2.1 tons CO/yr

Applicable Compliance Method: The annual CO emission limitation was established by multiplying the hourly limitation by the maximum operating schedule of 8,760 hours/year and then dividing by 2,000 pounds/ton. Therefore, provided compliance is demonstrated with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

- e. Emission Limitation: 0.04 lb PM₁₀/hr

Applicable Compliance Method: Compliance with the hourly PM₁₀ emission limitation shall be determined by using the following equation:

$$E_{max} \text{ (lb/hr)} = (F)(Q_{max})(C)$$

E_{max} = maximum hourly emissions
 F = AP-42 emissions factor (lb/MMdscf)
 Q_{max} = Maximum hourly stack flow (MMdscf/hr)
 C = Concentration of Methane (%) (assuming 4% Methane)

$$17 \text{ lb PM}_{10}/\text{MMdscf} \times 0.062 \text{ MMdscf mixed Gases/hr} \times 4\% \text{ CH}_4 = 0.04 \text{ lb PM}_{10}/\text{hr}$$

If required, compliance shall be demonstrated by using Methods 1 – 4 of 40 CFR, Part 60, Appendix A and Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M.

- f. Emission Limitation: 0.18 ton PM₁₀/yr

Applicable Compliance Method: The annual PM₁₀ emission limitation was established by multiplying the hourly limitation by the maximum operating schedule of 8,760 hours/year and then dividing by 2,000 pounds/ton. Therefore, provided compliance is demonstrated with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

- g. Emission Limitation: 0.0029 lb NMOC/hr

Applicable Compliance Method: Compliance with the hourly NMOC emission limitation shall be determined by using the following equation:

$$E_{max} \text{ (lb/hr)} = (E \text{ uncontrolled}) (100\% - \text{DRE})$$

$E \text{ uncontrolled}$ = summation of VOCs from Table 3-2 (lb/hr)
 DRE = destruction efficiency (%)

$$0.145 \text{ lb VOC/hr} \times (100\% - 98\%) = 0.0029 \text{ lb NMOC/hr}$$

- h. Emission Limitation: 0.013 ton NMOC/yr

Applicable Compliance Method: The annual NMOC emission limitation was established by multiplying the hourly limitation by the maximum operating schedule of 8,760 hours/year and then dividing by 2,000 pounds/ton. Therefore, provided compliance is demonstrated with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

- i. Emission Limitation: 2.06 lbs CH₄/hr

Applicable Compliance Method: Compliance with the hourly CH₄ emission limitation shall be determined by using the following equation:

$$E_{\max} \text{ (lb/hr)} = (Q_{\max})(C)(MW_{\text{CH}_4})(\text{lbmol}/385.5 \text{ scf})(10^6/\text{MMscf})(100\% - \text{DRE})$$

Q_{max} = maximum hourly stack flow (MMscf/hr)

C = concentration of CH₄ (%)

MW CH₄ = molecular weight of CH₄ (lb/lbmol)

DRE = destruction Efficiency (%)

$$0.062 \text{ MMscf mixed gases/hr} \times 4\% \text{ CH}_4 \times 16.04 \text{ lb CH}_4/\text{lbmol} \times \text{lbmol}/385.5 \text{ scf} \times 10^6 \text{ scf/MMscf} \times (100\% - 98\%) = 2.06 \text{ lb CH}_4/\text{hr}$$

- j. Emission Limitation: 9.02 tons CH₄/yr

Applicable Compliance Method: The annual CH₄ emission limitation was established by multiplying the hourly limitation by the maximum operating schedule of 8,760 hours/year and then dividing by 2,000 pounds/ton. Therefore, provided compliance is demonstrated with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

- k. Emission Limitation: Visible PE shall not exceed 5% opacity, as a six-minute average, from the stack.

Applicable Compliance Method: If required, compliance with the visible PE limitation shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

- g) Miscellaneous Requirements

- (1) None.