



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

6/30/2016

Genevieve Damico *Via E-Mail Notification*
United States Environmental Protection Agency
Mail Code: AR-18J
77 West Jackson Blvd.
Chicago, IL 60604-3507

RE: PROPOSED AIR POLLUTION TITLE V PERMIT
Facility Name: Carbon Limestone Landfill Gas Power Station
Facility ID: 0250050996
Permit Type: Renewal
Permit Number: P0117279

Dear Ms. Damico:

A proposed OAC Chapter 3745-77 Title V permit for the referenced facility has been issued for review by U.S. EPA. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. If U.S. EPA does not object to this proposed permit, the permit will be processed for issuance as a final action not less than 45 days from the date of this letter. Please contact me at (614) 644-2835 by the end of the 45 day review period if you wish to object to the proposed permit.

Sincerely,

A handwritten signature in black ink that reads "Michael E. Hopkins".

Michael E. Hopkins, P.E.
Assistant Chief, Permitting Section, DAPC

Cc: Ohio EPA DAPC, Northeast District Office



PROPOSED

Division of Air Pollution Control Title V Permit

for

Carbon Limestone Landfill Gas Power Station

| | |
|----------------|-----------------------------------|
| Facility ID: | 0250050996 |
| Permit Number: | P0117279 |
| Permit Type: | Renewal |
| Issued: | 6/30/2016 |
| Effective: | To be entered upon final issuance |
| Expiration: | To be entered upon final issuance |



Division of Air Pollution Control
Title V Permit
for
Carbon Limestone Landfill Gas Power Station

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Proposed Title V Permit
Carbon Limestone Landfill Gas Power Station
Permit Number: P0117279
Facility ID: 0250050996
Effective Date: To be entered upon final issuance

Authorization

Facility ID: 0250050996
Facility Description: Landfill gas power station
Application Number(s): A0051173
Permit Number: P0117279
Permit Description: Title V renewal permit for landfill gas power station (18 engines and one (1) thermal oxidizer).
Permit Type: Renewal
Issue Date: 6/30/2016
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Superseded Permit Number: P0085724

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

Carbon Limestone Landfill Gas Power Station
7960 South Stateline Road
Lowellville, OH 44436

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087
(330)963-1200

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Ohio EPA DAPC, Northeast District Office. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months and no later than 6 months prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director



Proposed Title V Permit
Carbon Limestone Landfill Gas Power Station
Permit Number: P0117279
Facility ID: 0250050996
Effective Date: To be entered upon final issuance

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. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions
 - (2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions
 - (3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting For State-Only Requirements
 - (4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (5) Standard Term and Condition A. 30.

(Authority for term: ORC 3704.036(A))

2. 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 (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), 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.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

- 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 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.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))



- c) The permittee shall submit required reports in the following manner:
- (1) All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any submitted scheduled maintenancerequests, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

- (2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions of this Title V permit), all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the



probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be submitted promptly to the Ohio EPA DAPC, Northeast District Office. Except as provided below, the written reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this Standard Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this Standard Term and Condition.

See A.29 below if no deviations occurred during the quarter.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

- (3) All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted to the Ohio EPA DAPC, Northeast District Office by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally

enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with Standard Term and Condition A.2.c)(2) above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))

- (4) 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 (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete." Signature by the Responsible Official may be represented by entry of the personal identification number (PIN) by the Responsible Official as part of the electronic submission process or by the scanned attestation document signed by the Responsible Official that is attached to the electronically submitted written report.

(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

- (5) Consistent with A.2.c.1. above, reports of any required monitoring and/or record keeping information required to be submitted to Ohio EPA shall be submitted to Ohio EPA DAPC, Northeast District Office unless otherwise specified.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. Reporting of Any Exceedence of a Federally Enforceable Emission Limitation or Control Requirement Resulting From Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance 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). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

4. Risk Management Plans

If applicable, the permittee shall 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"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

- a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or
- b) as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

5. 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.

(Authority for term: OAC rule 3745-77-07(A)(5))

6. 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.

(Authority for term: OAC rule 3745-77-07(A)(6))

7. General Requirements

- a) 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 except as provided pursuant to A.16 below.
- c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.11 below. 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.
- f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:
 - (1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or
 - (2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or
 - (3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))

8. 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.

(Authority for term: OAC rule 3745-77-07(A)(8))

9. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

(Authority for term: OAC rule 3745-77-07(A)(9))

10. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these standard terms and conditions shall apply to all operating scenarios authorized in this permit.

(Authority for term: OAC rule 3745-77-07(A)(10))

11. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

- a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

12. 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.

(Authority for term: OAC rule 3745-77-07(B))

13. Compliance Requirements

- a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V 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:
 - (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 paragraph (E) of OAC rule 3745-77-03.
 - (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.
- c) The permittee shall submit progress reports to the Ohio EPA DAPC, Northeast 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.
- d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the Ohio EPA DAPC, Northeast District Office) and the Administrator of the U.S. EPA in the following manner and with the following content:
 - (1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
 - (2) Compliance certifications shall include the following:
 - a. Identification of each term or condition that is the basis of the certification. The identification may include a statement by the Responsible Official that every term and condition that is federally enforceable has been reviewed, and such terms and conditions with which there has been continuous compliance throughout the year are not separately identified.
 - b. The permittee's current compliance status.



- c. Whether compliance was continuous or intermittent consistent with A.13.d.2.a above.
 - d. The method(s) used for determining the compliance status of the source currently and over the required reporting period consistent with A.13.d.2.a above.
 - e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
- (3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

14. Permit Shield

- a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.
- b) This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

15. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the Ohio EPA DAPC, Northeast District Office with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the Ohio EPA DAPC, Northeast District Office as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

16. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

(Authority for term: OAC rule 3745-77-07(G))

17. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

- a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.
- b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.
- c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).
- d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit-to-install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(Authority for term: OAC rule 3745-77-07(I))

18. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Federal Register 8314, Feb. 24, 1997), in the context of any future proceeding.

(This term is provided for informational purposes only.)



19. Insignificant Activities or Emissions Levels

Each IEU that is subject to one or more applicable requirements shall comply with those applicable requirements.

(Authority for term: OAC rule 3745-77-07(A)(1))

20. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

(Authority for term: OAC rule 3745-77-07(A)(1))

21. 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.

(Authority for term: OAC rule 3745-77-07(A)(1))

22. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the Responsible 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 Responsible Official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that 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 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

Unless otherwise exempted, no emissions unit identified in this permit that has been certified by the Responsible Official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

(Authority for term: OAC rule 3745-77-01)

23. Title VI Provisions

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:



- a) Persons operating appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.
- b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.
- c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(Authority for term: OAC rule 3745-77-01(H)(11))

24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or record keeping information shall be submitted to the Ohio EPA DAPC, Northeast District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Northeast District Office. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. 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, 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.)

25. Records Retention Requirements Under State Law Only

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.

26. 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.

(Authority for term: OAC rule 3745-77-07(C))

27. Scheduled Maintenance/Malfunction Reporting For State-Only Requirements

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 Ohio EPA DAPC, Northeast District Office 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).

28. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Ohio EPA DAPC, Northeast District Office must be notified in writing of any transfer of this permit.

(Authority for term: OAC rule 3745-77-01(C))

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

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation 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 by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

- a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or
- b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potential to emit; or
- c) where the company's Responsible Official has certified that an emissions unit has been permanently shut down.



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30. Submitting Documents Required by this Permit

All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the Ohio EPA DAPC, Northeast District Office, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the Responsible Official may be represented as provided through procedures established in Air Services.



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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) B.2 through B.5

2. The permit-to-install for emissions units P001 through P014, were evaluated based on the actual materials and the design parameters of the emissions unit 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/m³): 2.47

Maximum Hourly Emission Rate (lbs/hr): 2.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 4.86

MAGLC (ug/m³): 57

Pollutant: Formaldehyde

Ceiling Value (mg/m³): 0.18

Maximum Hourly Emission Rate (lbs/hr): 0.60

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 1.42

MAGLC (ug/m³): 4.3

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.).
4. 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.
5. 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

(Authority for term: OAC rule 3745-114-01)

6. MACT Subpart AAAA and Subpart A Requirements

a) Applicable Emissions Limitations and/or Control Requirements

- (1) The following emissions units contained in this permit are subject to MACT Subpart AAAA as control equipment for an existing affected source: P001-P014, P018 - P021

The applicable sections of the MACT Subpart AAAA have been cited in the appropriate sections for the emissions units subject to this rule.

b) Operational Restrictions

- (1) The permittee shall comply with the applicable compliance standards required under 40 CFR Part 63, Subpart AAAA including the following sections:

| | | |
|----|--------------------------|--|
| a. | 63.1935(a)(3) | Existing, affected area sources |
| b. | 63.1945(f) 63.1955(b) | Compliance requirements and compliance date for existing, area sources |
| c. | 63.1930, Table 1 | Applicable General Provisions |

(Authority for term: 40 CFR Part 63, Subpart AAAA, OAC rule 3745-77-07(C)(1))



c) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall comply with the applicable monitoring and record keeping requirements required under 40 CFR Part 63, Subpart AAAA, including the following sections:

| | | |
|----|--------------------|--|
| a. | 63.1960 | Compliance methods require 40 CFR, Part 60, Subpart WWW compliance and a written Startup, Shutdown, and Malfunction (SSM) Plan |
| b. | 63.1965 | Deviation clarifications for SSM plans and control device operating parameters |
| c. | 63.1975 | Calculating 3-hour block average for control device operating parameters |
| d. | 63.1980(a) and (b) | Required records |

(Authority for term: 40 CFR Part 63, Subpart AAAA, OAC rule 3745-77-07(C)(1))

d) Reporting Requirements

- (1) The permittee shall submit semiannual reports and such other notifications and reports to the Ohio EPA, Northeast District Office as are required pursuant to 40 CFR Part 63, Subpart AAAA, per the following sections:

| | | |
|----|--------------------|------------------------------------|
| a. | 63.1980(a) and (b) | Semi-annual reporting requirements |
|----|--------------------|------------------------------------|

(Authority for term: 40 CFR Part 63, Subpart AAAA, OAC rule 3745-77-07(C)(1))

e) Testing Requirements

- (1) P001 - P014, P018 and P019 are identical emissions units and the periodic testing shall be based upon testing three (3) of the units every 5 years rotating through the emissions units until all have been tested at least once, and then continuing to rotate through the emissions units in order in which they were initially tested. If the results of testing three units demonstrate that either any of the three units tested is greater than a 10% variance between each engine tested, Ohio EPA may require the facility to test an additional three emissions units that have not been tested to date.



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C. Emissions Unit Terms and Conditions



1. P017, Thermal Oxidizer

Operations, Property and/or Equipment Description:

John Zink Model "Enclosed ZTOF" Thermal Oxidizer Controlling a Siloxane Removal System - Rated at 9.0 mmBtu/hr and Burning Landfill Gas.

- 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 (PTI P0106018) | <p>Nitrogen Oxide (NO_x) emissions shall not exceed 0.08 lb/mmBtu, 0.72 pound per hour and 3.15 tons per year.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.20 lb/mmBtu, 1.8 pounds per hour and 7.88 tons per year.</p> <p>Particulate emissions (PM/PM₁₀) shall not exceed 0.17 pound per hour and 0.74 ton per year.</p> <p>Organic compound (OC) emissions shall not exceed 8.20 pounds per hour and 35.92 tons per year.</p> <p>Visible emissions, from the stack, shall not exceed 5% opacity as a six-minute average.</p> <p>See b)(2)a.</p> |
| b. | OAC rule 3745-31-05(a)(ii), as effective 12/01/2006 | See b)(2)b. |
| c. | 40 CFR Part 60, Subpart WWW | See c)(1). |

(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 emissions of nitrogen oxides, carbon monoxide, and particulate matter less than 10 microns in diameter from this air contaminant source since the calculated annual emission rates are each less than 10 tons per year.

c) Operational Restrictions

- (1) The permittee has committed to 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.

[Authority for term: P0106018 and OAC rule 3745-77-07(A)(1)]

- (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.

[Authority for term: P0106018 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

- (1) 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.

[Authority for term: P0106018 and OAC rule 3745-77-07(C)(1)]



- (2) 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.

[Authority for term: P0106018 and OAC rule 3745-77-07(C)(1)]

- (3) 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.

[Authority for term: P0106018 and OAC rule 3745-77-07(C)(1)]

- (4) 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.

[Authority for term: P0106018 and OAC rule 3745-77-07(C)(1)]



- (5) 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.

[Authority for term: P0106018 and OAC rule 3745-77-07(C)(1)]

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 "a" or "b" (above) where a prompt investigation was not conducted;
- d. each incident of deviation described in "a" or "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 "a" or "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.

[Authority for term: P0106018 and OAC rule 3745-77-07(C)(1)]

- (2) The permittee shall submit semiannual reports to the Ohio EPA Northeast District Office, which include all time periods during which LFG was combusted in the thermal oxidizer, before it was first dewatered. These reports shall be submitted by January 31, and July 31, and shall cover the records for the previous calendar six months.

[Authority for term: P0106018 and OAC rule 3745-77-07(C)(1)]

- (3) 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.

[Authority for term: P0106018 and OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

Nitrogen Oxide (NO_x) emissions shall not exceed 0.08 lb/mmBtu and 0.72 lb per hour.



Applicable Compliance Method:

The emissions of NO_x shall be determined by the following formula:

$$0.08 \text{ lb-NO}_x/\text{mmBtu} \times 9.0 \text{ mmBtu/hr} = 0.72 \text{ lb-NO}_x \text{ per hour}$$

The emission factor of 0.08 lb-NO_x/mmBtu was supplied by the manufacturer.

If required, compliance shall be demonstrated by using 40 CFR Part 60, Appendix A, Method 7.

b. Emission Limitation:

Nitrogen Oxide (NO_x) emissions shall not exceed 3.15 TPY

Applicable Compliance Method:

$$0.72 \text{ lb-NO}_x/\text{hour} \times 8760 \text{ hours/year} \times 1 \text{ ton}/2000 \text{ pounds} = 3.15 \text{ TPY}$$

This limitation was arrived at by multiplying the allowable hourly emission rate by 8760 hours per year and dividing by 2000 pounds per ton.

c. Emission Limitation:

Carbon monoxide (CO) emissions shall not exceed 0.20 lb/mmBtu and 1.8 lbs/hr.

Applicable Compliance Method:

$$0.20 \text{ lb-CO}/\text{mmBtu} \times 9.0 \text{ mmBtu/hr} = 1.8 \text{ lbs/hr}$$

If required, compliance shall be demonstrated by using 40 CFR Part 60, Appendix A, Method 10.

d. Emission Limitation:

Carbon monoxide (CO) emissions shall not exceed 7.88 TPY.

Applicable Compliance Method:

$$1.8 \text{ lbs-CO}/\text{hr} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 7.88 \text{ TPY CO}$$

This limitation was arrived at by multiplying the allowable hourly emission rate by 8760 hours per year and dividing by 2000 pounds per ton.

e. Emission Limitation:

Particulate emissions (PM/PM₁₀) shall not exceed 0.17 lb/hr.

Applicable Compliance Method:

Compliance shall be determined by using the following equation:



$E_p = EF \times \text{Flow} \times P \times C$ where

E_p = emissions of particulate matter, pound per hour

EF = emission factor from AP-42, section 2.4 Municipal Solid Waste Landfills, version 11/98, Table 2.4-5, 17 lbs/1 x 10⁶ dscf methane

Flow = flow rate of landfill gas through thermal oxidizer, 310 acfm

P = percentage of methane in landfill gas, assume 50%, 0.5

C = conversion factor, 60 minutes per hour

f. Emission Limitation:

Particulate emissions (PM/PM₁₀) shall not exceed 0.74 TPY

Applicable Compliance Method:

This limitation was arrived at by multiplying the allowable hourly emission rate by 8760 hours per year and dividing by 2000 pounds per ton.

g. Emission Limitation:

Organic compound (OC) emissions shall not exceed 8.20 lbs/hr.

Applicable Compliance Method:

Compliance shall be determined by using the following equation:

$E_{OC} = \text{Flow} \times C \times CC \times MW \times P \times (1 - D)$ where

E_{OC} = emissions of organic compounds, pounds per hour

Flow = flow rate of landfill gas to thermal oxidizer, acfm

C = conversion factor, 60 minutes per hour

CC = conversion factor, cf of landfill gas per lb-mole of landfill gas, 386

MW = molecular weight of methane, 16 lbs methane per lb-mole of methane

P = percentage of methane in landfill gas, 0.52 lb-mole of methane per lb-mole of landfill gas

D = destruction efficiency of thermal oxidizer, typically 98%, 0.98 (from AP-42, section 2.4 Municipal Solid Waste Landfills, version 11/98, Table 2.4-3).

h. Emission Limitation:

Organic compound (OC) emissions shall not exceed 35.92 TPY



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Applicable Compliance Method:

This limitation was arrived at by multiplying the allowable hourly emission rate by 8760 hours per year and dividing by 2000 pounds per ton.

i. Emission Limitation:

Visible emissions, from the stack, shall not exceed 5% opacity as a six-minute average.

Applicable Compliance Method:

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

[Authority for all the above testing requirement terms: P0106018 and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.



2. Emissions Unit Group -Caterpillar Group: P020, P021

| EU ID | Operations, Property and/or Equipment Description |
|-------|--|
| P020 | 2,233 hp Caterpillar Engine to burn LFG to produce Electricity |
| P021 | 2,233 hp Caterpillar Engine to burn LFG to produce Electricity |

- 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 (PTI P0109811) | Visible particulate emissions shall not exceed 10% opacity as a 6-minute average. Particulate emissions (PE)/particulate less than 10 microns in diameter (PM ₁₀) emissions shall not exceed 0.1 gram per brake horsepower hour, 0.49 pound/hour and 2.15 tons per year. Sulfur dioxide (SO ₂) emissions shall not exceed 0.28 pound per hour and 1.23 tons per year. Volatile organic compound (VOC) emissions shall not exceed 0.403 gram per brake horsepower hour and 8.67 tons per year. Hydrogen chloride (HCl) emissions shall not exceed 0.15 pound per hour and 0.66 ton per year. Organic compound (OC) emissions shall not exceed 5.84 grams per brake horsepower hour, 28.72 pounds per hour and 125.79 tons per year. |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|---|
| | | <p>See b)(2)a.</p> <p>Compliance with this rule includes compliance with 40 CFR Part 60, Subpart WWW, 40 CFR Part 60, Subpart JJJJ, 40 CFR Part 63, Subpart AAAA and 40 CFR Part 63, Subpart ZZZZ.</p> <p>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.</p> |
| b. | OAC rule 3745-31-05(A)(3), as effective 12/1/2006 | See b)(2)c. |
| c. | 40 CFR Part 52, Section 52.21 and OAC rules 3745-31-10 through 20 | Carbon monoxide (CO) emissions shall not exceed 2.75 grams per brake horsepower hour, 13.53 pounds per hour and 59.26 tons per year. |
| d. | 40 CFR Part 60, Subpart WWW 40 CFR Part 63, Subpart AAAA [The landfill gas fired power station acts as either a control device or a landfill gas treatment system for a landfill subject to these subparts; therefore, the control requirements or treatment requirement of this subpart apply.] | See b)(2)d. |
| e. | OAC rule 3745-17-11(B)(5) | <p>PE shall not exceed 0.062 pound per million Btu of actual heat input.</p> <p>The emission limitation specified in OAC rule 3745-17-11(B)(5) is currently less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3) as effective November 30, 2001.</p> <p>Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the Ohio State Implementation Plan, the particulate emission limitation in this rule will apply.</p> |
| f. | OAC rule 3745-17-07(A) | Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|---|
| | | <p>The visible particulate emission limitation specified in OAC rule 3745-17-07(A) is currently less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3) as effective November 30, 2001.</p> <p>Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the Ohio State Implementation Plan, the visible particulate emission limitation in this rule will apply.</p> |
| g. | OAC rule 3745-18-06 | <p>SO₂ emissions shall not exceed 0.5 pound per million Btu of actual heat input.</p> <p>The emission limitation specified in OAC rule 3745-18-06 is currently less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3) as effective November 30, 2001.</p> <p>Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the Ohio State Implementation Plan, the SO₂ emission limitation in this rule will apply.</p> |
| h. | <p>40 CFR Part 60, Subpart JJJJ (40 CFR 60.4230-4248)</p> <p>[In accordance with 40 CFR 60.4230(a)(4)(i), this emissions unit is a landfill gas fired lean burn stationary spark ignition (SI) internal combustion engine (ICE) constructed after June 12, 2006 and manufactured after July 1, 2007 with a maximum engine power greater than or equal to 500 HP]</p> | <p>Emission standards for landfill gas SI-ICE manufactured after July 1, 2007 as specified in Table 1 of 40 CFR Part 60, Subpart JJJJ.</p> <p>NO_x: 3.0 grams per horsepower-hour or 220 ppmvd at 15% oxygen.</p> <p>CO: 5.0 grams per horsepower-hour or 610 ppmvd at 15% oxygen.</p> <p>VOC: 1.0 gram per horsepower-hour or 80 ppmvd at 15% oxygen</p> <p>The NO_x emission limitations established in this subpart are less stringent than that established pursuant to OAC rule 3745-31-05(D)(1)(a).</p> <p>The VOC emission limitations established</p> |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|---|
| | | <p>in this subpart are currently less stringent than those established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>The CO emission limitations established in this subpart are less stringent than those established pursuant to OAC rules 3745-31-10 through 20.</p> |
| i. | <p>40 CFR Part 63, Subpart ZZZZ</p> <p>[In accordance with 40 CFR 63.6590(a)(2)(i), this emissions unit is a landfill gas fired internal combustion engine (ICE) constructed on or after December 19, 2002 with a maximum engine power greater than or equal to 500 HP located at a major source of HAPs.]</p> | See b)(2)e. |
| j. | ORC 3704.03(T) | 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 and OAC rule 3745-31-05(F). |
| k. | OAC rule 3745-31-05(D)(1)(a) Voluntary restriction to avoid PSD | Nitrogen oxides (NO _x) emissions shall not exceed 0.6 gram per brake horsepower hour and 12.92 tons per year. |

(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 requirement 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 OAC rule 3745-31-05, then these emission limits/control measures no longer apply.

b. The internal combustion engine shall operate using lean burn technology.



- c. 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 PE/PM₁₀, HCl, SO₂ and VOC emissions from this air contaminant source since the uncontrolled potentials to emit for PE/PM₁₀, HCl, SO₂ and VOC are less than 10 tons per year.

- d. Collected landfill gas shall be treated for sale or additional use per 40 CFR 60.752(b)(2)(iii)(C) or shall be routed to a control system per 40 CFR 60.752(b)(2)(iii)(B). The control system shall be designed and operated to reduce the non-methane organic compound (NMOC) 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.
- e. In accordance with 40 CFR 63.6590(b)(2), a new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of 63.6645(f) and the requirements of 63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

The permittee shall comply with the General Provisions specified in 40 CFR Part 63, Subpart ZZZZ including 63.6665 and Table 8 which only include the Initial Notification requirements.

- f. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart JJJJ, including the following sections:

| | |
|------------|-------------------------|
| 60.4236(b) | Installation deadlines |
| 60.4243(b) | Compliance Requirements |

c) **Operational Restrictions**

- (1) This emissions unit shall burn only landfill gas.
[Authority for term: P0109811 and OAC rule 3745-77-07(A)(1)]
- (2) The permittee shall install, 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.
[Authority for term: P0109811 and OAC rule 3745-77-07(A)(1)]
- (3) When demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(C), the permittee has committed to compressing, filtering for particles up to 10 microns in diameter, and dewatering the landfill gas.



Dewatering shall be defined as a reduction of the dew point of the landfill gas by at least 20 degrees Fahrenheit.

[Authority for term: P0109811 and OAC rule 3745-77-07(A)(1)]

- (4) The allowable gas flow rate to the internal combustion engine's combustion chambers shall not exceed 600 scfm.

[Authority for term: P0109811 and OAC rule 3745-77-07(A)(1)]

- (5) When demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(B), the minimum allowable average temperature of the internal combustion engine's combustion chambers, based on 3-hour blocks of time, shall not be lower than the minimum combustion temperature that was established during the most recent compliance test that demonstrated compliance with the applicable requirements.

[Authority for term: P0109811 and OAC rule 3745-77-07(A)(1)]

- (6) When demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(B), the maximum allowable gas flow rate to the internal combustion engines, based on 3-hour blocks of time, shall not be higher than the maximum gas flow rate that was established during the most recent compliance test that demonstrated compliance with the applicable requirements.

[Authority for term: P0109811 and OAC rule 3745-77-07(A)(1)]

- (7) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subpart JJJJ, including the following sections:

| | |
|------------|---|
| 60.4234 | Duration of compliance with the emissions standards |
| 60.4243(b) | Maintenance Requirements |
| 60.4243(g) | Air-to-Fuel (ATR) controllers |

[Authority for term: P0109811, OAC rule 3745-77-07(A)(1), and 40 CFR Part 60, Subpart JJJJ]

d) **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.

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]

- (2) The permittee shall record the dates and times when the landfill gas is treated for sale or additional use and when the internal combustion engines are operated as landfill gas control devices.

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]

- (3) The permittee shall install, calibrate and maintain a continuous device that monitors and records the temperature of the landfill gas prior to dewatering and after dewatering. When demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(C), the temperature shall be monitored at all times.

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]

- (4) The permittee shall 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, for the exhaust of the internal combustion engines. When demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(B), the temperatures shall be monitored at all times.

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]

- (5) The permittee shall install, calibrate, and maintain a device that monitors and records gas flow to or bypass of the internal combustion engines. The gas flow rate measuring device shall record the flow to the control device at least every 15 minutes.

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]

- (6) When attempting to demonstrate compliance with 40 CFR 60.752(b)(2)(iii)(B), 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.

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]

- (7) When attempting to demonstrate compliance with 40 CFR 60.752(b)(2)(iii)(B), 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 exceeded the maximum allowable gas flow as established during the most recent compliance test.

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]

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

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]



- (9) The permittee shall collect and record all times the flow rate to the internal combustion engine exceeded 600 scfm. The gas flow rate to the engine shall be determined by dividing the total gas flow into the treatment system(s) by the number of engines operating.

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]

- (10) The permittee shall record (daily) the operating hours of each engine.

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]

- (11) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subpart JJJJ, including the following sections:

| | |
|-------------------|---|
| 60.4243(b)(2)(ii) | Keeping a maintenance plan and records of conducted maintenance |
| 60.4245(a) | Records required |

[Authority for term: P0109811, OAC rule 3745-77-07(C)(1) and 40 CFR Part 60, Subpart JJJJ]

- (12) The permittee shall comply with the applicable restrictions of 40 CFR Part 63, Subpart ZZZZ, including the following sections:

| | |
|------------|---|
| 63.6655(c) | Monitoring and recording of daily fuel usage and operating of unit to reasonably minimize HAP emissions |
| 63.6660 | Record retention and format requirements |

[Authority for term: P0109811, OAC rule 3745-77-07(C)(1), and 40 CFR Part 63, Subpart ZZZZ]

e) Reporting Requirements

- (1) The permittee shall submit semiannual written reports that:
- a. identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit;
 - b. describe any corrective actions taken to eliminate the visible particulate emissions;
 - c. 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 3-hour average;
 - d. when demonstrating compliance with 40 CFR 60.752 (b)(2)(iii)(C), identify the date(s) and duration when the temperature difference of the landfill gas between pre-dewatering and post-dewatering is less than 20 degrees Fahrenheit; and
 - e. when demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(B), identify the date(s) and duration of each 3-hour block of time when the average temperature



within the internal combustion engine did not meet the minimum temperature requirements.

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.

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]

- (2) 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.

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]

- (3) 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 immediately 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.

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]

- (4) The permittee shall submit deviation (excursion) reports that identify each time the gas flow rate to the engine exceeded 600 scfm

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]

- (5) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the quarterly deviation (excursion) reports. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

[Authority for term: P0109811 and OAC rule 3745-77-07(C)(1)]

- (6) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subpart JJJJ, including the following sections:

| | |
|------------|-------------------------|
| 60.4245(c) | Initial Notification |
| 60.4245(d) | Performance Test Report |

[Authority for term: P0109811, OAC rule 3745-77-07(C)(1) and 40 CFR Part 60, Subpart JJJJ]

- (7) The permittee shall comply with the applicable restrictions of 40 CFR Part 63, Subpart ZZZZ, including the following sections:



| | |
|------------------------|---|
| 63.6645(f) | Initial Notification Requirements |
| 63.6645(c) | Initial Notification Required 120 Days After Subject |
| 63.6650(g) and Table 7 | Annual reporting of fuel flow and heat values, operating limits in permit, problems with meters and any deviations. |

[Authority for term: P0109811, OAC rule 3745-77-07(C)(1) and 40 CFR Part 63 Subpart ZZZZ]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:

VOC emissions shall not exceed 0.403 gram per brake horsepower hour and 8.67 tons per year.

Applicable Compliance Methods:

Compliance with the VOC hourly emission limitation shall be demonstrated in accordance with the performance test requirement specified in f)(2).

The tpy emission limitation was developed by multiplying the short-term allowable VOC emission limitation by the maximum rated power (2233 bhp-hr) times the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton and 453.59 grams per pound. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

b. Emission Limitation:

Visible particulate emissions shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

c. Emission Limitation:

PE/PM₁₀ emissions shall not exceed 0.1 gram per brake horsepower hour.



Applicable Compliance Method:

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 5.

d. Emission Limitations:

PE/PM₁₀ emissions shall not exceed 0.49 pound per hour and 2.15 tons per year.

Applicable Compliance Methods:

Compliance with the PE/PM₁₀ hourly emission rate shall be demonstrated by using the following equation:

$$E = EF \times 2233/453.59$$

where:

E = emissions of PE/PM₁₀ (pound per hour);

EF = emission factor provided by manufacturer (0.1 g PM₁₀/bhp hr);

2,233 = rating of engine (bhp hr); and

453.59 = conversion factor grams per pound.

The tpy emission limitation was developed by multiplying the short-term allowable PE/PM₁₀ emission limitation (0.49 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

e. Emission Limitations:

NO_x emissions shall not exceed 0.6 gram per brake horsepower hour and 12.92 tons per year.

Applicable Compliance Methods:

Compliance with the NO_x hourly emission and technical limitations shall be demonstrated in accordance with the performance test requirement specified in f)(2).

The tpy emission limitation was developed by multiplying the short-term allowable NO_x emission limitation (2.95 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.



f. Emission Limitations:

CO emissions shall not exceed 2.75 grams per brake horsepower hour, 13.53 pounds per hour and 59.26 tons per year.

Applicable Compliance Methods:

Compliance with the CO hourly emission and technical limitations shall be demonstrated in accordance with the performance test requirement specified in f)(2).

The tpy emission limitation was developed by multiplying the short-term allowable CO emission limitation (13.53 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

g. Emission Limitations:

SO₂ emissions shall not exceed 0.28 pound per hour and 1.23 tons per year.

Applicable Compliance Methods:

Compliance with the SO₂ hourly emission rate shall be demonstrated by using the following equation:

$$E = EF \times (MW/24.45) \times \text{Flow} \times 60 / (35.31 \times 1000 \times 454)$$

where:

E = emissions of SO₂ (pound per hour);

EF = emission factor from AP-42, Section 2.4, Municipal Solid Waste Landfills, version 10/2008 (46.9 ppmv SO₂);

MW = molecular weight of SO₂, 64.06;

24.45 = equation constant;

Flow = average flow of LFG to engine, ft³ per minute;

60 = conversion factor, minutes per hour;

35.31 = conversion factor, ft³ per m³;

1000 = conversion factor, milligrams per gram; and

454 = conversion factor, grams per pound.

The tpy emission limitation was developed by multiplying the short-term allowable SO₂ emission limitation (0.28 lb/hr) by the maximum annual hours of



operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

h. Emission Limitation:

The control system shall be designed and operated to reduce the NMOC by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, on a dry basis (ppmvd) as hexane at 3 percent oxygen.

Applicable Compliance Method:

If required, compliance with the control efficiency limitation shall be demonstrated in accordance with the performance test requirement specified in f)(2).

Compliance with this condition is not required if all landfill gas is treated in compliance with 40 CFR 60.752(b)(2)(iii)(C).

i. Emission Limitation:

PE shall not exceed 0.062 pound per million Btu of actual heat input.

Applicable Compliance Method:

If required, compliance with the PE pound per million Btu of actual heat input limitation shall be demonstrated based upon an emission test performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 5.

j. Emission Limitations:

HCl emissions shall not exceed 0.15 pound per hour and 0.66 ton per year.

Applicable Compliance Methods:

If required, compliance with the HCl hourly emission limitation shall be demonstrated based upon an emission test performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 26.

The tpy emission limitation was developed by multiplying the short-term allowable HCl emission limitation (0.15 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

k. Emission Limitations:

OC emissions shall not exceed 5.84 grams per brake horsepower hour, 28.72 pounds per hour and 125.79 tons per year.



Applicable Compliance Methods:

If required, compliance with the OC hourly emission and technical limitations shall be demonstrated based upon an emission test performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 25.

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (28.72 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

I. Emission Limitation:

Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

m. Emission Limitation:

SO₂ emissions shall not exceed 0.5 pound per million Btu of actual heat input.

Applicable Compliance Method:

If required, compliance with the SO₂ pound per million Btu of actual heat input limitation shall be demonstrated based upon an emission test performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 8.

n. Emission Limitation:

Nitrogen oxide emissions shall not exceed 3.0 grams per horsepower-hour or 220 ppmvd at 15% oxygen.

Applicable Compliance Method:

Compliance with the NO_x emission and technical limitations shall be demonstrated in accordance with the performance test requirement specified in f)(2).

o. Emission Limitation:

Carbon monoxide emissions shall not exceed 5.0 grams per horsepower-hour or 610 ppmvd at 15% oxygen.



Applicable Compliance Method:

Compliance with the CO emission and technical limitations shall be demonstrated in accordance with the performance test requirement specified in f)(2).

p. Emission Limitation:

Volatile organic compound emissions shall not exceed 1.0 gram per horsepower-hour or 80 ppmvd at 15% oxygen

Applicable Compliance Method:

Compliance with the VOC emission and technical limitations shall be demonstrated in accordance with the performance test requirement specified in f)(2).

[Authority for all the above testing requirement terms: P0109811 and OAC rule 3745-77-07(C)(1)]

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

- a. The permittee shall conduct an emission test within 12 months after issuance of the permit and, thereafter, in accordance with the emission test requirements specified in 40 CFR Part 60, Subpart JJJJ.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for NO_x, CO and VOC.
- c. Unless the permittee can demonstrate that all landfill gas burned in the internal combustion engines has been compressed, filtered for particulates up to 10 microns in diameter, and dewatered since the previous compliance test, 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 methods shall be employed to demonstrate compliance with the allowable mass emission rates:

NO_x - Methods 1 through 4 and 7; or 7E of 40 CFR Part 60, Appendix A;
CO - Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A;
VOC - Methods 1 through 4 and 25 or 25A of 40 CFR Part 60, Appendix A; and
NMOC - If required, methods 1 through 4 and 25 or 25C of 40 CFR Part 60, Appendix A.

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



- e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
- f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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).
- g. 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.
- h. 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.

[Authority for all the above testing requirement terms: P0109811 and OAC rule 3745-77-07(C)(1)]

- (3) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subpart JJJJ, including the following sections:

| | |
|---------------|--|
| 60.4243(b)(1) | Certified engines - Compliance demonstration |
| 60.4243(b)(2) | Non-certified engines - Compliance demonstration |
| 60.4244 | Test methods and procedures |

[Authority for term: P0109811, OAC rule 3745-77-07(C)(1), and 40 CFR Part 60, Subpart JJJJ]

- g) Miscellaneous Requirements
 - (1) None.



3. Emissions Unit Group -Deutz Group 1:

P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013, P014

| EU ID | Operations, Property and/or Equipment Description |
|--------------|---|
| P001 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas. |
| P002 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas. |
| P003 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas |
| P004 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas |
| P005 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas |
| P006 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas |
| P007 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas |
| P008 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas |
| P009 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas |
| P010 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas |
| P011 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas |
| P012 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas |
| P013 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas |
| P014 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas |

- 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) (PTI P0104593) | <p>Visible particulate emissions shall not exceed 10% opacity as a 6-minute average.</p> <p>Particulate emissions (PE) shall not exceed 0.9 pound per hour and 3.8 tons per year.</p> <p>PM₁₀ emissions shall not exceed 0.4 pound per hour and 1.7 tons per year.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.23 pound per hour and 1.0 ton per year.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 0.7 pound per hour and 3.0 tons per year.</p> <p>Hydrogen chloride (HCl) emissions shall not exceed 0.13 pound per hour and 0.6 ton per year.</p> <p>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</p> |
| b. | 40 CFR Part 52, Section 52.21 and OAC rules 3745-31-10 through -20 | <p>Carbon monoxide (CO) emissions shall not exceed 9.4 pounds per hour, 0.67 lb/mmBtu and 41.2 tons per year.</p> <p>Nitrogen oxide (NO_x) emissions shall not exceed 4.9 pounds per hour, 0.36 lb/mmBtu and 21.5 tons per year.</p> |
| c. | 40 CFR Part 60, Subpart WWW | See b)(2)b. and b)(2)c. |
| d. | 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). |
| e. | 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). |
| f. | 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). |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|-------------------------------|---|
| g. | OAC rule 3745-114 | See B.2, B.3, B.4 and B.5. |
| h. | 40 CFR Part 63, Subpart AAAA | See B.6 |
| i. | 40 CFR Part 63, Subpart A | See B.6 |

(2) Additional Terms and Conditions

- a. The internal combustion engine shall operate using lean burn technology.
- b. Collected landfill gas shall be treated for sale or additional use per 40 CFR 60.752(b)(2)(iii)(C), or shall be routed to a control system per 40 CFR 60.752(b)(2)(iii)(B). The control system shall be designed and operated to reduce the non-methane organic compound (NMOC) 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.
- c. All untreated landfill gas from any vent shall be routed to a control system per 40 CFR 60.752(b)(2)(iii)(C).

c) Operational Restrictions

- (1) This emissions unit shall burn only landfill gas.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0104593]

- (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.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0104593]

- (3) When demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(C), the permittee has committed to compressing, filtering for particles up to 10 microns in diameter, and dewatering the landfill gas.

Dewatering shall be defined as a reduction of the dew point of the landfill gas by at least 20 degrees Fahrenheit.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0104593]

- (4) The allowable gas flow rate to the internal combustion engine's combustion chamber shall be determined during the most recent compliance test.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0104593]

- (5) When demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(B), the minimum allowable temperature of the internal combustion engine's combustion chamber shall not



be lower than the minimum combustion temperature that was established during the most recent compliance test.

[Authority for term: 40 CFR 60.752(b), OAC rule 3745-77-07(A)(1) and PTI P0104593]

- (6) When an internal combustion engine is not operating, the landfill gas shall be diverted to the existing enclosed combustor at the Carbon Limestone Landfill or to an internal combustion engine that is operating.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0104593]

d) **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.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0104593]

- (2) The permittee shall record the dates and times when the landfill gas is treated for sale or additional use and when the internal combustion engines are operated as landfill gas control devices.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0104593]

- (3) The permittee shall install, calibrate and maintain a continuous device that monitors and records the temperature of the landfill gas prior to dewatering and after dewatering. When demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(C), landfill gas treatment, the temperatures shall be monitored at all times.

[Authority for term: 40 CFR 60.756(b), OAC rule 3745-77-07(C)(1) and PTI P0104593]

- (4) The permittee shall install, calibrate and maintain an engine combustion chamber 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. When demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(B), landfill gas control, the temperatures shall be monitored at all times.

[Authority for term: 40 CFR 60.756(b), OAC rule 3745-77-07(C)(1) and PTI P0104593]



- (5) The permittee shall install, calibrate, and maintain a device that monitors and records gas flow to, or bypass of, the internal combustion engines. The gas flow rate measuring device shall record the flow to the control device at least every 15 minutes.

[Authority for term: 40 CFR 60.756(b), OAC rule 3745-77-07(C)(1) and PTI P0104593]

- (6) When attempting to demonstrate compliance with 40 CFR 60.752(b)(2)(iii)(B), landfill gas control, 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.

[Authority for term: 40 CFR 60.756(b), OAC rule 3745-77-07(C)(1) and PTI P0104593]

- (7) 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 as established during the most recent compliance test.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0104593]

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0104593]

e) Reporting Requirements

- (1) The permittee shall submit semiannual written reports that:
 - a. identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit;
 - b. describe any corrective actions taken to eliminate the visible particulate emissions;
 - c. 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 3-hour average;
 - d. when demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(C), landfill gas treatment, identify the date(s) and duration when the temperature after dewatering exceeded the temperature prior to dewatering by less than 20 degrees Fahrenheit; and
 - e. when demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(B), landfill gas control, identify the date(s) and duration of each 3-hour block of time when the average temperature within the internal combustion engine did not meet the minimum temperature requirements.



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.

[Authority for terms e)(1)a and b: OAC rule 3745-77-07(C)(1) and PTI P0104593]

- (2) 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.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0104593]

- (3) 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 immediately 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.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0104593]

f) **Testing Requirements**

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

- a. The emission testing shall be conducted within 6 months prior to permit expiration.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates, nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), and hydrogen chloride (HCl).
- c. Unless the permittee can demonstrate that all landfill gas burned in the internal combustion engines has been compressed, filtered for particulates up to 10 microns in diameter, and dewatered since the previous compliance test, 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 rates:

PE – Methods 1 through 5;
NO_x – Methods 1 through 4 and Method 7 or 7E;
CO – Methods 1 through 4 and Method 10;
HCl – Methods 1 through 4 and Method 26 or 26A; and
VOC – Methods 1 through 4 and Method 25 or 25A.



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

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

- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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).
- f. 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.
- g. 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.

[Authority for all the above testing requirement terms: P0104593 and OAC rule 3745-77-07(C)(1)]

- (2) Compliance with the emission limitations established in b)(1) and b)(2) of this permit shall be determined in accordance with the following methods:

- a. Emission Limitation:

VOC emissions shall not exceed 0.7 pound per hour and 3.0 tons per year.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirements in f)(1).

The tpy emission limitation was developed by multiplying the short-term allowable VOC emission limitation (0.7 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.



b. Emission Limitation:

Visible particulate emissions shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

Compliance shall be demonstrated based upon visible particulate emission observations performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Method 9.

c. Emission Limitation:

PE shall not exceed 0.9 pound per hour and 3.8 tons per year.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirements in f)(1).

The tpy emission limitation was developed by multiplying the short-term allowable PE limitation (0.9 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

d. Emission Limitation:

NO_x emissions shall not exceed 4.9 pounds per hour, 0.36 lb/mmBtu and 21.5 tons per year.

Applicable Compliance Method:

Compliance with the hourly and lb/mmBtu emission limitations shall be determined in accordance with the performance test requirements in f)(1).

The tpy emission limitation was developed by multiplying the short-term allowable NO_x emission limitation (4.9 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

e. Emission Limitation:

CO emissions shall not exceed 9.4 pounds per hour, 0.67 lb/mmBtu and 41.2 tons per year.

Applicable Compliance Method:

Compliance with the hourly and lb/mmBtu emission limitations shall be determined in accordance with the performance test requirements in f)(1).



The tpy emission limitation was developed by multiplying the short-term allowable CO emission limitation (9.4 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

f. Emission Limitation:

SO₂ emissions shall not exceed 0.23 pound per hour and 1.0 ton per year.

Applicable Compliance Method:

Compliance with the hourly SO₂ emission limitation shall be determined by multiplying the maximum inlet gas flow of 0.029 mmscf per hour by 7.786 pounds of SO₂ per mmscf, (AP-42, 2.4 Municipal Solid Waste Landfills, (11/98))

The tpy emission limitation was developed by multiplying the short-term allowable SO₂ emission limitation (0.23 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

If required, compliance with the hourly SO₂ emission limitation shall be determined by 40 CFR Part 60, Appendix A, Method 6, or other method approved by Ohio EPA in advance of the test event.

g. Emission Limitation:

HCl emissions shall not exceed 0.13 pound per hour and 0.6 ton per year.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined in accordance with the performance test requirements in f)(1).

The tpy emission limitation was developed by multiplying the short-term allowable HCl emission limitation (0.13 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

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 specified in f)(1)c.



Compliance with this condition is not required if all landfill gas is treated in compliance with 40 CFR 60.752(b)(2)(iii)(C).

i. Emission Limitation:

PM₁₀ emissions shall not exceed 0.4 pound per hour and 1.7 tons per year.

Applicable Compliance Method:

Compliance with the PM₁₀ hourly emission rate shall be determined by using the following equation:

$$E = EF \times 1,400/454$$

where:

E = emissions of PM₁₀ (pound per hour);

EF = emission factor provided by manufacturer (0.12 g PM₁₀/bKW hr);

1,400 = rating of engine (bKW); and

454 = conversion factor grams per pound.

The tpy emission limitation was developed by multiplying the short-term allowable PM₁₀ emission limitation (0.4 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for all the above testing requirement terms: P0104593 and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.



4. Emissions Unit Group - Deutz Group 2: P018, P019

| EU ID | Operations, Property and/or Equipment Description |
|-------|--|
| P018 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas |
| P019 | 1400 bkW Deutz TBG 620 V16 K Internal combustion engine to produce electricity from landfill gas |

- 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) (PTI P0106069) | Visible emissions shall not exceed 10% opacity as a six-minute average. Carbon monoxide (CO) emissions shall not exceed 9.4 lbs per hour. Nitrogen oxide (NO _x) emissions shall not exceed 4.9 lbs per hour. Organic compound (OC) emissions shall not exceed 14.65 lbs per hour. Hydrogen chloride (HCl) emissions shall not exceed 0.13 lb per hour. |
| b. | OAC rule 3745-31-05(A)(3), as effective 11/30/2001 | Particulate emissions less than 10 microns in diameter (PM/PM ₁₀) shall not exceed 0.37 lb per hour. Particulate emissions shall not exceed 0.9 lb per hour. Sulfur dioxide (SO ₂) emissions shall not exceed 0.23 lb per hour. Volatile organic compound (VOC) emissions shall not exceed 0.68 lb per |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|---|--|
| | | hour. See b)(2)d. |
| c. | OAC rule 3745-31-05(a)(ii), as effective 12/01/2006 | See b)(2)e. |
| d. | OAC rule 3745-31-05(D)(1)(a) | <p>Combined particulate emissions less than 10 microns in diameter (PM/PM₁₀), from P018 and P019, shall not exceed 3.01 TPY</p> <p>Combined particulate emissions, from P018 and P019, shall not exceed 7.33 TPY.</p> <p>Combined carbon monoxide emissions, from P018 and P019, shall not exceed 76.54 TPY.</p> <p>Combined nitrogen oxide emissions, from P018 and P019, shall not exceed 39.90 TPY.</p> <p>Combined organic compound emissions, from P018 and P019, shall not exceed 119.29 TPY.</p> <p>Combined sulfur dioxide emissions, from P018 and P019, shall not exceed 1.63 TPY.</p> <p>Combined volatile organic compound emissions, from P018 and P019, shall not exceed 5.54 TPY.</p> <p>Combined hydrogen chloride emissions, from P018 and P019, shall not exceed 1.06 TPY.</p> <p>See b)(2)a. and b)(2)c.</p> |
| e. | 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). |
| f. | 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). |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|-------------------------------|--|
| g. | 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). |
| h. | 40 CFR Part 60, Subpart WWW | See b)(2)b. |
| i. | 40 CFR Part 63, Subpart AAAA | See B.6 |
| j. | 40 CFR Part 63, Subpart A | See B.6 |

(2) Additional Terms and Conditions

- a. The internal combustion engine shall operate using lean burn technology.
- b. Collected landfill gas shall be treated for sale or additional use per 40 CFR 60.752(b)(2)(iii)(C) or shall be routed to a control system per 40 CFR 60.752(b)(2)(iii)(B). The control system shall be designed and operated to reduce the non-methane organic compound (NMOC) 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.
- c. The maximum combined annual operating hours of P018 and P019 shall not exceed 16,285.7, based upon a rolling, 365-day summation of the operating hours.
- d. 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 pollutant 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 revision to OAC rule 3745-31-05, the requirement 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.
- e. 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 emissions of particulate emissions less than 10 microns in diameter, particulate emissions, volatile organic compounds, and sulfur dioxide compounds from this air contaminant source since the calculated annual emission rates are each less than 10 tons per year.

c) Operational Restrictions

- (1) This emissions unit shall burn only landfill gas.

[Authority for term: P0106069 and OAC rule 3745-77-07(A)(1)]

- (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.

[Authority for term: P0106069 and OAC rule 3745-77-07(A)(1)]

- (3) When demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(C), the permittee has committed to compressing, filtering for particles up to 10 microns in diameter, and dewatering the landfill gas.

Dewatering shall be defined as a reduction of the dew point of the landfill gas by at least 20 degrees Fahrenheit.

[Authority for term: P0106069 and OAC rule 3745-77-07(A)(1)]

- (4) The allowable gas flow rate to the internal combustion engine's combustion chambers shall be determined during the most recent compliance test.

[Authority for term: P0106069 and OAC rule 3745-77-07(A)(1)]

- (5) When demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(B), the minimum allowable average temperature of the internal combustion engine's combustion chambers, based on 3-hour blocks of time, shall not be lower than the minimum combustion temperature that was established during the most recent compliance test that demonstrated compliance with the applicable requirements.

[Authority for term: P0106069 and OAC rule 3745-77-07(A)(1)]

d) 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.

[Authority for term: P0106069 and OAC rule 3745-77-07(C)(1)]



- (2) The permittee shall record the dates and times when the landfill gas is treated for sale or additional use and when the internal combustion engines are operated as landfill gas control devices.

[Authority for term: P0106069 and OAC rule 3745-77-07(C)(1)]
- (3) The permittee shall install, calibrate and maintain a continuous device that monitors and records the temperature of the landfill gas prior to dewatering and after dewatering. When demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(C), the temperature shall be monitored at all times.

[Authority for term: P0106069 and OAC rule 3745-77-07(C)(1)]
- (4) The permittee shall 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, for the exhaust of the internal combustion engines. When demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(B), the temperatures shall be monitored at all times.

[Authority for term: P0106069 and OAC rule 3745-77-07(C)(1)]
- (5) The permittee shall install, calibrate, and maintain a device that monitors and records gas flow to or bypass of the internal combustion engines. The gas flow rate measuring device shall record the flow to the control device at least every 15 minutes.

[Authority for term: P0106069 and OAC rule 3745-77-07(C)(1)]
- (6) When attempting to demonstrate compliance with 40 CFR 60.752(b)(2)(iii)(B), 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.

[Authority for term: P0106069 and OAC rule 3745-77-07(C)(1)]
- (7) 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 as established during the most recent compliance test.

[Authority for term: P0106069 and OAC rule 3745-77-07(C)(1)]
- (8) The permittee shall record each day when a fuel other than landfill gas was burned in this emissions unit.

[Authority for term: P0106069 and OAC rule 3745-77-07(C)(1)]
- (9) The permittee shall maintain daily records of the following information:
 - a. the operating hours for P018 and P019 each day;
 - b. the combined operating hours for P018 and P019 each day; and,



- c. the rolling, 365-day summation of the combined operating hours of P018 and P019.

[Authority for term: P0106069 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

- (1) The permittee shall submit semiannual written reports that:

- a. identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit;
- b. describe any corrective actions taken to eliminate the visible particulate emissions;
- c. 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 3-hour average;
- d. when demonstrating compliance with 40 CFR 60.752 (b)(2)(iii)(C), identify the date(s) and duration when the temperature difference of the landfill gas between pre-dewatering and post-dewatering is less than 20 degrees Fahrenheit;
- e. when demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(B), identify the date(s) and duration of each 3-hour block of time when the average temperature within the internal combustion engine did not meet the minimum temperature requirements; and
- f. all exceedances of the rolling, 365-day restriction on the hours of combined operation for P018 and P019.

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.

[Authority for term: P0106069 and OAC rule 3745-77-07(C)(1)]

- (2) 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.

[Authority for term: P0106069 and OAC rule 3745-77-07(C)(1)]

- (3) 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 immediately 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.

[Authority for term: P0106069 and OAC rule 3745-77-07(C)(1)]



f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Particulate emissions less than 10 microns in diameter (PM₁₀) shall not exceed 0.37 lb per hour.

Applicable Compliance Method:

If required, compliance shall be determined by using Method 201 of 40 CFR Part 60, Appendix A.

b. Emission Limitation:

Particulate emissions (PE) shall not exceed 0.9 lb per hour.

Applicable Compliance Method:

If required, compliance shall be determined by using Method 5 of 40 CFR Part 60, Appendix A.

c. Emission Limitation:

Carbon monoxide (CO) emissions shall not exceed 9.4 lbs per hour.

Applicable Compliance Method:

If required compliance shall be determined by using Method 10 of 40 CFR Part 60, Appendix A.

d. Emission Limitation:

Nitrogen oxide (NO_x) emissions shall not exceed 4.9 lbs per hour.

Applicable Compliance Method:

If required compliance shall be determined by using Method 7E of 40 CFR Part 60, Appendix A.

e. Emission Limitation:

Organic compound (OC) emissions shall not exceed 14.65 lbs per hour.

Applicable Compliance Method:

If required compliance shall be determined by using Method 25 or 25A of 40 CFR Part 60, Appendix A.



- f. Emission Limitation:
Sulfur dioxide (SO₂) emissions shall not exceed 0.23 lb per hour.
Applicable Compliance Method:
If required, compliance shall be determined by using Method 6 of 40 CFR Part 60, Appendix A
- g. Emission Limitation:
Volatile organic compound (VOC) emissions shall not exceed 0.68 lb per hour.
Applicable Compliance Method:
If required compliance shall be determined by using Method 25 or 25A of 40 CFR Part 60, Appendix A.
- h. Emission Limitation:
Hydrogen chloride (HCl) emissions shall not exceed 0.13 lb per hour.
Applicable Compliance Method:
If required compliance shall be determined by using Method 26 of 40 CFR Part 60, Appendix A.
- i. Emission Limitation:
Combined particulate emissions less than 10 microns in diameter (PM₁₀), from P018 and P019, shall not exceed 3.01 TPY
Applicable Compliance Method:
Compliance shall be demonstrated by using the following equation:
E = (EF x H)/2000 where
E = combined emission rate of PM₁₀, TPY, from P018 and P019
EF = emission factor from manufacturer, 0.37 lb PM₁₀/hr
H = combined operating hours of P018 and P019, hrs.
2000 = conversion factor, pounds per ton
- j. Emission Limitation:
Combined particulate emissions, from P018 and P019, shall not exceed 7.33 TPY.



Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$E = (EF \times H)/2000$ where

E = combined emission rate of PM, TPY, from P018 and P019

EF = emission factor from manufacturer, 0.9 lb/PE/hr

H = combined operating hours of P018 and P019, hrs.

2000 = conversion factor, pounds per ton

k. Emission Limitation:

Combined carbon monoxide emissions, from P018 and P019, shall not exceed 76.54 TPY.

Applicable Compliance Method:

Compliance with the CO pound per hour mass emission rate limitation and the combined operating hour restriction is sufficient to demonstrate compliance.

l. Emission Limitation:

Combined nitrogen oxide emissions, from P018 and P019, shall not exceed 39.90 TPY.

Applicable Compliance Method:

Compliance with the NO_x pound per hour mass emission rate limitation and the combined operating hour restriction is sufficient to demonstrate compliance.

m. Emission Limitation:

Combined organic compound emissions, from P018 and P019, shall not exceed 119.29 TPY.

Applicable Compliance Method:

Compliance with the OC pound per hour mass emission rate limitation and the combined operating hour restriction is sufficient to demonstrate compliance.

n. Emission Limitation:

Combined sulfur dioxide emissions, from P018 and P019, shall not exceed 1.63 TPY.



Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$E = (EF \times V \times H) / 2000 \quad \text{where}$$

E = combined emission rate of SO₂, TPY, from P018 and P019

EF = emission factor from landfill, assumed to be approximately 7.79 lb SO₂/1E6 dscf LF

MC = methane content of LFG, 53%, 0.53

V = combined volume of LFG combusted per hour in P018 and P019, dscf/hr

H = combined operating hours of P018 and P019, hours.

2000 = conversion factor, pounds per ton

o. Emission Limitation:

Combined volatile organic compound emissions, from P018 and P019, shall not exceed 5.54 TPY.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$E = (EF \times H) / 2000 \quad \text{where}$$

E = combined emission rate of VOC, TPY, from P018 and P019

EF = emission factor from manufacturer, 0.68 lb VOC/hr

H = combined operating hours of P018 and P019, hours.

2000 = conversion factor, pounds per ton

p. Emission Limitation:

Combined hydrogen chloride emissions, from P018 and P019, shall not exceed 1.06 TPY.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$E = (EF \times H) / 2000 \quad \text{where}$$

E = combined emission rate of VOC, TPY, from P018 and P019

EF = emission factor from manufacturer, 0.13 lb HCl/hr



H = combined operating hours of P018 and P019, hours.

2000 = conversion factor, pounds per ton

q. 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.

r. Emission Limitation:

The control system shall be designed and operated to reduce the NMOC by 98 weight-percent or the outlet NMOC emissions shall be reduced to less than 20 parts per million by volume, on a dry basis (ppmvd) as hexane at 3 percent oxygen.

Applicable Compliance Method:

If required, compliance with the control efficiency limitation shall be demonstrated in accordance with the performance test requirement specified in f)(2).

Compliance with this condition is not required if all landfill gas is treated in compliance with 40 CFR 60.752(b)(2)(iii)(C)

[Authority for all the above testing requirement terms: P0106069 and OAC rule 3745-77-07(C)(1)]

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

- a. The emission testing shall be conducted in accordance with the facility-wide terms and conditions in B.2.e)(1) of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PE, NO_x, CO, VOC and HCl.
- c. Unless the permittee can demonstrate that all landfill gas burned in the internal combustion engines has been compressed, filtered for particulates up to 10 microns in diameter, and dewatered since the previous compliance test, 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 methods shall be employed to demonstrate compliance with the allowable mass emission rates:

PE – Method 5 of 40 CFR, Part 60, Appendix A;



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NO_x - Method 7 or 7E of 40 CFR, Part 60, Appendix A;
CO - Method 10 of 40 CFR, Part 60, Appendix A;
HCl - Method 26 or 26A of 40 CFR, Part 60, Appendix A;
VOC - Method 25 or 25A of 40 CFR, Part 60, Appendix A; and
NMOC - If required, methods 1 through 4 and 25 or 25C of 40 CFR Part 60, Appendix A.

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

- e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
- f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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).
- g. 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.
- h. 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.

[Authority for all the above testing requirement terms: P0106069 and OAC rule 3745-77-07(C)(1)]

- g) Miscellaneous Requirements
 - (1) None.