



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

10/24/2016

Peter Lucas
Stony Hollow Recycling and Disposal Facility
2460 S. Gettysburg Ave
Dayton, OH 45417

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0857043008
Permit Number: P0121742
Permit Type: OAC Chapter 3745-31 Modification
County: Montgomery

Certified Mail

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

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**
- **What should you do if you notice a spill or environmental emergency?**

How to appeal this permit

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF 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.

What should you do if you notice a spill or environmental emergency?

Any spill or environmental emergency which may endanger human health or the environment should be reported to the Emergency Response 24-HOUR EMERGENCY SPILL HOTLINE toll-free at (800) 282-9378. Report non-emergency complaints to the appropriate district office or local air agency.

If you have any questions regarding your permit, please contact Regional Air Pollution Control Agency at (937)225-4435 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



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

Cc: U.S. EPA
RAPCA; Indiana; Kentucky



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
Stony Hollow Recycling and Disposal Facility**

| | |
|----------------|----------------------------------|
| Facility ID: | 0857043008 |
| Permit Number: | P0121742 |
| Permit Type: | OAC Chapter 3745-31 Modification |
| Issued: | 10/24/2016 |
| Effective: | 10/24/2016 |



Division of Air Pollution Control
Permit-to-Install
for
Stony Hollow Recycling and Disposal Facility

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Final Permit-to-Install
Stony Hollow Recycling and Disposal Facility
Permit Number: P0121742
Facility ID: 0857043008
Effective Date: 10/24/2016

Authorization

Facility ID: 0857043008
Facility Description: Refuse System
Application Number(s): A0056981
Permit Number: P0121742
Permit Description: Chapter 31 modification permit to include an increase in the landfill gas (LFG) collection efficiency of the gas collection and control system from 75% to 85% and replace the 1,350 cfm LFG Secondary Flare listed in PTI P0120744 issued 06/15/16 with a 3,000 cfm LFG Secondary Flare.
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: \$1,250.00
Issue Date: 10/24/2016
Effective Date: 10/24/2016

This document constitutes issuance to:

Stony Hollow Recycling and Disposal Facility
2460 South Gettysburg Avenue
Dayton, OH 45418-2323

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

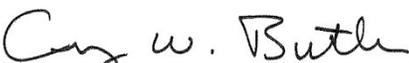
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Regional Air Pollution Control Agency
117 South Main Street
Dayton, OH 45422-1280
(937)225-4435

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Craig W. Butler
Director



Final Permit-to-Install
Stony Hollow Recycling and Disposal Facility
Permit Number: P0121742
Facility ID: 0857043008
Effective Date: 10/24/2016

Authorization (continued)

Permit Number: P0121742

Permit Description: Chapter 31 modification permit to include an increase in the landfill gas (LFG) collection efficiency of the gas collection and control system from 75% to 85% and replace the 1,350 cfm LFG Secondary Flare listed in PTI P0120744 issued 06/15/16 with a 3,000 cfm LFG Secondary Flare.

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

| | |
|-----------------------------------|---------------------|
| Emissions Unit ID: | P001 |
| Company Equipment ID: | Landfill Operations |
| Superseded Permit Number: | P0120744 |
| General Permit Category and Type: | Not Applicable |



Final Permit-to-Install
Stony Hollow Recycling and Disposal Facility
Permit Number: P0121742
Facility ID: 0857043008
Effective Date: 10/24/2016

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

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

2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

- a) Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Regional Air Pollution Control Agency.

- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Regional Air Pollution Control Agency. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the Regional Air Pollution Control Agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Regional Air Pollution Control Agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

- a) 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 appropriate Ohio EPA District Office or contracted

local air agency, 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 electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a Responsible Official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
- (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c) The permittee shall submit progress reports to the Regional Air Pollution Control Agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

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

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s) not exempt from the requirement to obtain a Permit-to-Install.

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

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the

Director within a reasonable time before the termination date and the permittee shows good cause for any such extension.

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

Unless otherwise exempted, no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

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

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d) must be obtained before operating the source in a manner that would violate the existing Title V permit requirements.

13. Construction Compliance Certification

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

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

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

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

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

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

18. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

19. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.



Final Permit-to-Install
Stony Hollow Recycling and Disposal Facility
Permit Number: P0121742
Facility ID: 0857043008
Effective Date: 10/24/2016

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.
2. The following emissions units contained in this permit are subject to 40 CFR Part 60, Subparts A and WWW, Standards of Performance for Municipal Solid Waste Landfills (NSPS): P001. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://www.ecfr.gov> or by contacting the appropriate Ohio EPA District office or local air agency.
3. The following emissions units contained in this permit are subject to 40 CFR Part 63, Subparts A and AAAA, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills: P001. The complete NESHAP requirements, including the NESHAP General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://www.ecfr.gov> or by contacting the appropriate Ohio EPA District office or local air agency.
4. [63.1930]
This section contained within 40 CFR Part 63, Subpart AAAA, establishes national emission standards for hazardous air pollutants for existing and new municipal solid waste (MSW) landfills. This subpart requires all landfills described in Section 63.1935 to meet the requirements of 40 CFR Part 60, Subpart Cc or WWW and requires timely control of bioreactors. This subpart also requires such landfills to meet the startup, shutdown, and malfunction (SSM) requirements of the general provisions of this part and provides that compliance with the operating conditions shall be demonstrated by parameter monitoring results that are within the specified ranges. It also includes additional reporting requirements.
5. [63.1935]
You are subject to this subpart if you meet the criteria in paragraph (a) or (b) of this section.
 - a) You are subject to this subpart if you own or operate a MSW landfill that has accepted waste since November 8, 1987 or has additional capacity for waste deposition and meets any one of the three criteria in paragraphs a)(1) through a)(3) of this section:
 - (1) Your MSW landfill is a major source as defined in 40 CFR 63.2 of Subpart A.
 - (2) Your MSW landfill is collocated with a major source as defined in 40 CFR 63.2 of Subpart A.
 - (3) Your MSW landfill is an area source landfill that has a design capacity equal to or greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters (m³) and has estimated uncontrolled emissions equal to or greater than 50 megagrams per year (Mg/yr) NMOC as calculated according to Section 60.754(a) of the MSW landfills new source performance standards in 40 CFR Part 60, Subpart WWW, the Federal plan, or an EPA approved and effective State or tribal plan that applies to your landfill.
 - b) You are subject to this subpart if you own or operate a MSW landfill that has accepted waste since November 8, 1987 or has additional capacity for waste deposition, that includes a bioreactor, as defined in Section 63.1990, and that meets any one of the criteria in paragraphs b)(1) through b)(3) of this section:

- (1) Your MSW landfill is a major source as defined in 40 CFR 63.2 of Subpart A.
- (2) Your MSW landfill is collocated with a major source as defined in 40 CFR 63.2 of Subpart A.
- (3) Your MSW landfill is an area source landfill that has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m³ and that is not permanently closed as of January 16, 2003.

6. [63.1940]

- a) An affected source of this subpart is a MSW landfill, as defined in Section 63.1990, that meets the criteria in Section 63.1935(a) or (b). The affected source includes the entire disposal facility in a contiguous geographic space where household waste is placed in or on land, including any portion of the MSW landfill operated as a bioreactor.
- b) A new affected source of this subpart is an affected source that commenced construction or reconstruction after November 7, 2000. An affected source is reconstructed if it meets the definition of reconstruction in 40 CFR 63.2 of Subpart A.
- c) An affected source of this subpart is existing if it is not new.

7. [63.1945]

- a) If your landfill is a new affected source, you must comply with this subpart by January 16, 2003 or at the time you begin operating, whichever is last.
- b) If your landfill is an existing affected source, you must comply with this subpart by January 16, 2004.
- c) If your landfill is a new affected source and is a major source or is collocated with a major source, you must comply with the requirements in Sections 63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of Subpart WWW.
- d) If your landfill is an existing affected source and is a major source or is collocated with a major source, you must comply with the requirements in Sections 63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of Subpart WWW, the Federal plan, or EPA approved and effective State or tribal plan that applies to your landfill or by January 13, 2004, whichever occurs later.
- e) If your landfill is a new affected source and is an area source meeting the criteria in Section 63.1935(a)(3), you must comply with the requirements of Sections 63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of Subpart WWW.
- f) If your landfill is an existing affected source and is an area source meeting the criteria in Section 63.1935(a)(3), you must comply with the requirements in Sections 63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of Subpart WWW, the Federal plan, or EPA approved and effective State or tribal plan that applies to your landfill or by January 16, 2004, whichever occurs later.

8. [63.1947]

You must comply with this subpart by the dates specified in Section 63.1945(a) or (b) of this subpart. If you own or operate a bioreactor located at a landfill that is not permanently closed as of January 16, 2003 and has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m³, then you must install and operate a collection and control system that meets the criteria in 40 CFR 60.752(b)(2)(v) of Part 60, Subpart WWW, the Federal plan, or EPA approved and effective State plan according to the schedule specified in paragraph a), b), or c) of this section.

- a) If your bioreactor is at a new affected source, then you must meet the requirements in paragraphs (a)(1) and (2) of this section:
 - (1) Install the gas collection and control system for the bioreactor before initiating liquids addition.
 - (2) Begin operating the gas collection and control system within 180 days after initiating liquids addition or within 180 days after achieving a moisture content of 40 percent by weight, whichever is later. If you choose to begin gas collection and control system operation 180 days after achieving a 40 percent moisture content instead of 180 days after liquids addition, use the procedures in Section 63.1980(g) and (h) to determine when the bioreactor moisture content reaches 40 percent.
- b) If your bioreactor is at an existing affected source, then you must install and begin operating the gas collection and control system for the bioreactor by January 17, 2006 or by the date your bioreactor is required to install a gas collection and control system under 40 CFR Part 60, Subpart WWW, the Federal plan, or EPA approved and effective State plan or tribal plan that applies to your landfill, whichever is earlier.
- c) If your bioreactor is at an existing affected source and you do not initiate liquids addition to your bioreactor until later than January 17, 2006, then you must meet the requirements in paragraphs (c)(1) and (2) of this section:
 - (1) Install the gas collection and control system for the bioreactor before initiating liquids addition.
 - (2) Begin operating the gas collection and control system within 180 days after initiating liquids addition or within 180 days after achieving a moisture content of 40 percent by weight, whichever is later. If you choose to begin gas collection and control system operation 180 days after achieving a 40 percent moisture content instead of 180 days after liquids addition, use the procedures in Section 63.1980(g) and (h) to determine when the bioreactor moisture content reaches 40 percent.

9. [63.1950]

You are no longer required to comply with the requirements of this subpart when you are no longer required to apply controls as specified in 40 CFR 60.752(b)(2)(v) of Subpart WWW, or the Federal plan or EPA approved and effective State plan or tribal plan that implements 40 CFR Part 60, Subpart Cc, whichever applies to your landfill.

10. [63.1952]
If you own or operate a landfill that includes a bioreactor, you are no longer required to comply with the requirements of this subpart for the bioreactor provided you meet the conditions of either paragraphs a) or b) of this section.
- a) Your affected source meets the control system removal criteria in 40 CFR 60.752(b)(2)(v) of Part 60, Subpart WWW or the bioreactor meets the criteria for a nonproductive area of the landfill in 40 CFR 60.759(a)(3)(ii) of Part 60, Subpart WWW.
 - b) The bioreactor portion of the landfill is a closed landfill as defined in 40 CFR 60.751, Subpart WWW, you have permanently ceased adding liquids to the bioreactor, and you have not added liquids to the bioreactor for at least 1 year. A closure report for the bioreactor must be submitted to the Administrator as provided in 40 CFR 60.757(d) of Subpart WWW.
 - c) Compliance with the bioreactor control removal provisions in this section constitutes compliance with 40 CFR Part 60, Subpart WWW or the Federal plan, whichever applies to your bioreactor.
11. [63.1955]
- a) You must fulfill one of the requirements in paragraph a)(1) or a)(2) of this section, whichever is applicable:
 - (1) Comply with the requirements of 40 CFR Part 60, Subpart WWW.
 - (2) Comply with the requirements of the Federal plan or EPA approved and effective State plan or tribal plan that implements 40 CFR Part 60, Subpart Cc.
 - b) If you are required by 40 CFR 60.752(b)(2) of Subpart WWW, the Federal plan, or an EPA approved and effective State or tribal plan to install a collection and control system, you must comply with the requirements in Sections 63.1960 through 63.1985 and with the general provisions of this part specified in Table 1 of this subpart.
 - c) For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, record keeping or reporting provisions, you must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been approved under 40 CFR Part 60 Subpart WWW or the Federal plan, or EPA approved and effective State or tribal plan, these alternatives can be used to comply with this subpart, except that all affected sources must comply with the SSM requirements in Subpart A of this part as specified in Table 1 of this subpart and all affected sources must submit compliance reports every 6 months as specified in Section 63.1980(a) and (b), including information on all deviations that occurred during the 6-month reporting period. Deviations for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3 hour monitoring block average.
 - d) If you own or operate a bioreactor that is located at a MSW landfill that is not permanently closed and has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m³, then you must meet the requirements of paragraph (a) and the additional requirements in paragraphs d)(1) and d)(2) of this section.

- (1) You must comply with the general provisions specified in Table 1 of this subpart and Sections 63.1960 through 63.1985 starting on the date you are required to install the gas collection and control system.
- (2) You must extend the collection and control system into each new cell or area of the bioreactor prior to initiating liquids addition in that area, instead of the schedule in 40 CFR 60.752(b)(2)(ii)(A)(2).

12. [63.1960]
Compliance is determined in the same way it is determined for 40 CFR Part 60, Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d) of Subpart WWW, are used to demonstrate compliance with the operating conditions for control systems. If a deviation occurs, you have failed to meet the control device operating conditions described in this subpart and have deviated from the requirements of this subpart. Finally, you must develop and implement a written SSM plan according to the provisions in 40 CFR 63.6(e)(3). A copy of the SSM plan must be maintained on site. Failure to write, implement, or maintain a copy of the SSM plan is a deviation from the requirements of this subpart.
13. [63.1965]
A deviation is defined in Section 63.1990. For the purposes of the landfill monitoring and SSM plan requirements, deviations include the items in paragraphs a) through c) of this section.
 - a) A deviation occurs when the control device operating parameter boundaries described in 40 CFR 60.758(c)(1) of Subpart WWW are exceeded.
 - b) A deviation occurs when 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour.
 - c) A deviation occurs when a SSM plan is not developed, implemented, or maintained on site.
14. [63.1975]
Averages are calculated in the same way as they are calculated in 40 CFR Part 60, Subpart WWW, except that the data collected during the events listed in paragraphs a), b), c), and d) of this section are not to be included in any average computed under this subpart:
 - a) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.
 - b) Startups.
 - c) Shutdowns.
 - d) Malfunctions.

15. [63.1980]
- a) Keep records and reports as specified in 40 CFR Part 60, Subpart WWW, or in the Federal plan, EPA approved State plan or tribal plan that implements 40 CFR Part 60, Subpart Cc, whichever applies to your landfill, with one exception: You must submit the annual report described in 40 CFR 60.757(f) every 6 months.
 - b) You must also keep records and reports as specified in the general provisions of 40 CFR Part 60 and this part as shown in Table 1 of this subpart. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports.
 - c) For bioreactors at new affected sources you must submit the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) within 180 days after the date you are required to begin operating the gas collection and control system by Section 63.1947(a)(2) of this subpart.
 - d) For bioreactors at existing affected sources, you must submit the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) within 180 days after the compliance date specified in Section 63.1947(b) of this subpart, unless you have previously submitted a compliance report for the bioreactor required by 40 CFR Part 60, Subpart WWW, the Federal plan, or an EPA approved and effective State plan or tribal plan.
 - e) For bioreactors that are located at existing affected sources, but do not initiate liquids addition until later than the compliance date in Section 63.1947(b) of this subpart, you must submit the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) within 180 days after the date you are required to begin operating the gas collection and control system by Section 63.1947(c) of this subpart.
 - f) If you must submit a semiannual compliance report for a bioreactor as well as a semiannual compliance report for a conventional portion of the same landfill, you may delay submittal of a subsequent semiannual compliance report for the bioreactor according to paragraphs f)(1) through f)(3) of this section so that the reports may be submitted on the same schedule.
 - (1) After submittal of your initial semiannual compliance report and performance test results for the bioreactor, you may delay submittal of the subsequent semiannual compliance report for the bioreactor until the date the initial or subsequent semiannual compliance report is due for the conventional portion of your landfill.
 - (2) You may delay submittal of your subsequent semiannual compliance report by no more than 12 months after the due date for submitting the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) for the bioreactor. The report shall cover the time period since the previous semiannual report for the bioreactor, which would be a period of at least 6 months and no more than 12 months.
 - (3) After the delayed semiannual report, all subsequent semiannual reports for the bioreactor must be submitted every 6 months on the same date the semiannual report for the conventional portion of the landfill is due.
 - g) If you add any liquids other than leachate in a controlled fashion to the waste mass and do not comply with the bioreactor requirements in Sections 63.1947, 63.1955(c) and 63.1980(c)

through (f) of this subpart, you must keep a record of calculations showing that the percent moisture by weight expected in the waste mass to which liquid is added is less than 40 percent. The calculation must consider the waste mass, moisture content of the incoming waste, mass of water added to the waste including leachate recirculation and other liquids addition and precipitation, and the mass of water removed through leachate or other water losses. Moisture level sampling or mass balances calculations can be used. You must document the calculations and the basis of any assumptions. Keep the record of the calculations until you cease liquids addition.

- h) If you calculate moisture content to establish the date your bioreactor is required to begin operating the collection and control system under Section 63.1947(a)(2) or (c)(2), keep a record of the calculations including the information specified in paragraph (g) of this section for 5 years. Within 90 days after the bioreactor achieves 40 percent moisture content, report the results of the calculation, the date the bioreactor achieved 40 percent moisture content by weight, and the date you plan to begin collection and control system operation.

16. [63.1985]

- a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency as well as the U.S. EPA has the authority to implement and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.
- b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under Subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.
- c) The authorities that will not be delegated to State, local, or tribal agencies are as follows. Approval of alternatives to the standards in Section 63.1955. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

17. [63.1990]

Terms used in this subpart are defined in the Clean Air Act, 40 CFR Part 60, Subparts A, Cc, and WWW; 40 CFR Part 62, Subpart GGG, and Subpart A of this part, and this section that follows:

Bioreactor means a MSW landfill or portion of a MSW landfill where any liquid other than leachate (leachate includes landfill gas condensate) is added in a controlled fashion into the waste mass (often in combination with recirculating leachate) to reach a minimum average moisture content of at least 40 percent by weight to accelerate or enhance the anaerobic (without oxygen) biodegradation of the waste.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart, including, but not limited to, any emissions limitation (including any operating limit) or work practice standard;

- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation, (including any operating limit), or work practice standard in this subpart during SSM, regardless of whether or not such failure is permitted by this subpart.

Emissions limitation means any emission limit, opacity limit, operating limit, or visible emissions limit.

EPA approved State plan means a State plan that EPA has approved based on the requirements in 40 CFR Part 60, Subpart B to implement and enforce 40 CFR Part 60, Subpart Cc. An approved State plan becomes effective on the date specified in the notice published in the Federal Register announcing EPA's approval.

Federal plan means the EPA plan to implement 40 CFR Part 60, Subpart Cc for existing MSW landfills located in States and Indian country where State plans or tribal plans are not currently in effect. On the effective date of an EPA approved State or tribal plan, the Federal plan no longer applies. The Federal plan is found at 40 CFR Part 62, Subpart GGG.

Municipal solid waste landfill or MSW landfill means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. A municipal solid waste landfill may also receive other types of RCRA Subtitle D wastes (see Section 257.2 of this chapter) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of a municipal solid waste landfill may be separated by access roads. A municipal solid waste landfill may be publicly or privately owned. A municipal solid waste landfill may be a new municipal solid waste landfill, an existing municipal solid waste landfill, or a lateral expansion.

Tribal plan means a plan submitted by a tribal authority pursuant to 40 CFR Parts 9, 35, 49, 50, and 81 to implement and enforce 40 CFR Part 60, Subpart Cc.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

18. As stated in Sections 63.1955 and 63.1980, you must meet each requirement in Table 1 of Subpart AAAA of Part 63: Applicability of NESHAP General Provisions to Subpart AAAA that applies to you.



Final Permit-to-Install
Stony Hollow Recycling and Disposal Facility
Permit Number: P0121742
Facility ID: 0857043008
Effective Date: 10/24/2016

C. Emissions Unit Terms and Conditions

1. P001, Landfill Operations

Operations, Property and/or Equipment Description:

Landfill Operations with active landfill gas collection and control system which includes two flares (3500 cfm LFG Primary Flare and a 3,000 cfm LFG Secondary Flare)

- 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) and ORC 3704.03(T) | <p><u>Fugitive dust from landfill operations</u> The requirements of this rule are equivalent to the reasonably available control measures (RACM) to minimize or eliminate visible particulate emissions of fugitive dust established by OAC rule 3745-17-08(B).</p> <p><u>Fugitive landfill emissions:</u> Fugitive emissions of non-methane organic carbons (NMOC) from this emissions unit shall not exceed 2.60 tons/month averaged over a 12-month rolling period.</p> <p><u>Controlled emissions from the flares</u> Nitrogen oxide (NOx) emissions shall not exceed 3.80 tons/month averaged over a 12-month rolling period.</p> <p>Carbon monoxide (CO) emissions shall not exceed 17.31 tons/month averaged over a 12-month rolling period.</p> <p>Sulfur dioxide (SO2) emissions shall not exceed 0.92 ton/month averaged over a 12-month rolling period.</p> |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|--|
| | | PM ₁₀ emissions shall not exceed 0.87 ton/month averaged over a 12-month rolling period. |
| b. | OAC rule 3745-31-05(A)(3) as effective 06/30/08 | <p>Volatile organic compound (VOC) from the flares shall not exceed 0.12 ton per month averaged over a twelve-month rolling period.</p> <p>See b)(2)a., below.</p> |
| c. | OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008 | <p>The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the potential to emit is less than 10 tons per year.</p> <p>See b)(2)b., below.</p> |
| d. | OAC rule 3745-17-07(B)(1) | Visible emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average, from all waste materials, except asbestos-containing materials. |
| e. | OAC rule 3745-17-08(B) | Employ reasonably available control measures (RACM) to minimize or eliminate visible PE of fugitive dust. See b)(2)h. through b)(2)m. |
| f. | 40 CFR Part 60, Subpart WWW | See b)(2)c. through b)(2)g., below. |
| g. | 40 CFR Part 63, Subpart AAAA and Subpart A | See B.2 through B.18 in Section B. |
| h. | OAC rule 3745-20 and the NESHAP (40 CFR Part 61, Subparts A and M) | See b)(2)n. through b)(2)y. below. |
| i. | 40 CFR Part 60.18 | Flares shall be designed and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours and meet required control device requirements. |

(2) Additional Terms and Conditions

- a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- c. When the calculated NMOC emission rate is equal to or greater than 50 megagrams (55 tons) per year, the permittee shall:
 - i. Submit a collection and control system design plan prepared by a professional engineer to the Administrator and the Regional Air Pollution Control Agency (RAPCA) within 1 year. The collection and control system design plan shall satisfy the requirements as specified in 40 CFR Part 60.752(b)(2)(ii). In accordance with the Tier 2 Landfill Gas Sampling Report notification dated June 9, 2003, the permittee is required to submit the collection and control system design plan by June 10, 2004. A design plan has been submitted by the permittee to satisfy these requirements.
 - ii. Install a collection and control system within 18 months after submittal of the aforementioned design plan. In accordance with the Tier 2 Landfill Gas Sampling Report notification dated June 9, 2003, the permittee shall have the collection and control system installed by December 10, 2005. A collection and control system has been installed by the permittee to satisfy these requirements.
 - iii. All of the collected gas shall be routed to a control system that complies with one of the following, in accordance with 40 CFR Part 60.752(b)(2)(iii):
 - (a) An open flare designed and operated in accordance with 40 CFR Part 60.18.
 - (b) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce the NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen.
 - (c) Route all of the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of 40 CFR Part 60.752(b)(2)(iii)(A) or 40 CFR Part 60.752(b)(2)(iii)(B). The reduction efficiency or parts per million by volume shall be established by an initial performance test to be conducted no later than 180 days after the initial startup of the approved control system using test methods specified in 40 CFR Part 60.754(d).
- d. With an active gas collection system, the following requirements shall be satisfied, as specified in 40 CFR Part 60.752(b)(2)(ii)(A):

- i. The system shall be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment.
 - ii. The system shall collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of 5 years or more if active, or 2 years or more if closed or at final grade.
 - iii. The system shall collect gas at a sufficient extraction rate.
 - iv. The system shall be designed to minimize off-site migration of subsurface landfill gases.
- e. With a passive gas collection system, the following requirements shall be satisfied, as specified in 40 CFR Part 60.752(b)(2)(ii)(B):
- i. The system shall be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment.
 - ii. The system shall collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of 5 years or more if active, or 2 years or more if closed or at final grade.
 - iii. The system shall be designed to minimize off-site migration of subsurface landfill gases.
 - iv. The system shall be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners shall be installed as required under 40 CFR 258.40.
- f. When the collected gas is venting to an open flare, the open flare shall be designed and operated as follows:
- i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
 - ii. The flare shall be operated with a flame present at all times.
 - iii. The permittee shall comply with either the requirements following in e.iii.(a) and e.iii.(b) or the requirements in paragraph e.iii.(c):
 - (a) Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined as follows:

$$H_t = k \times (\sum C_i H_i; \text{ for } i=1 \text{ through } i=n)$$

where,

- Ht = net heating value of the sample, MJ/scm; where the net enthalpy per mole of off gas is based on combustion at 25 degrees C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 degrees C;
- k = constant, 1.740×10^{-7} (1/ppm) (g mole/scm) (MJ/kcal) where the standard temperature for (g mole/scm) is 20 degrees C.
- Ci = concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77; and
- Hi = net heat of combustion of sample component i, kcal/g mole at 25 degrees C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 (incorporated by reference as specified in section 60.17) if published values are not available or cannot be calculated.

- (b) A steam-assisted and nonassisted flare shall be designed for and operated with an exit velocity of less than 18.3 m/sec. (60 ft/sec), except:
 - (i) steam-assisted and nonassisted flare shall be designed for and operated with an exit velocity of equal to or greater than 18.3 m/sec, but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf); and

steam-assisted and nonassisted flare shall be designed for and operated with an exit velocity of less than the velocity, Vmax, and less than 122 m/sec (400 ft/sec) are allowed; as determined by

$$\text{Log}_{10}(\text{Vmax}) = (\text{Ht} + 28.8)/31.7$$

where,

- Vmax = maximum permitted velocity, m/sec
- 28.8 = constant
- 31.7 = constant
- Ht = the net heating value as determined in section 2.b)(2)e.iii(a) above.

- (c) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity, V_{max} , as determined by the following equation:

$$V_{max} = (X_{h2} - K1) * K2$$

where,

- V_{max} = maximum permitted velocity, m/sec
- $K1$ = constant, 6.0 volume-percent hydrogen
- $K2$ = constant, 3.9 (m/sec)/volume-percent hydrogen
- X_{h2} = the volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77.

- iv. Air-assisted flare shall be designed for and operated with an exit velocity of less than the velocity, V_{max} , as determined by the following equation:

$$V_{max} = 8.706 + 0.7084 (H_t)$$

where,

- V_{max} = maximum permitted velocity, m/sec
- 8.706 = constant
- 0.7084 = constant
- H_t = the net heating value as determined in section 2.b)(2)e.iii.a. above.

- g. With an active gas collection system, the collection and control system may be capped or removed provided that all of the following conditions, as specified in 40 CFR Part 60.752(b)(2)(v), are met:
 - i. The landfill shall be a closed landfill as defined in 40 CFR Part 60.751. A closure report shall be submitted to the Administrator as provided in 40 CFR 60.757(d).
 - ii. The collection and control system shall have been in operation a minimum of 15 years.
 - iii. Following the procedures specified in 40 CFR 60.754(b) of this subpart, the calculated NMOC gas produced by the landfill shall be less than 50 megagrams (55 tons) per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

- h. The landfill areas that are covered by this permit and subject to the requirements of OAC rule 3745-17-08 include all landfill areas where solid wastes are deposited.
- i. The permittee shall employ reasonably available control measures (RACM) on all landfill operations associated with load-in of MSW for the purpose of ensuring compliance with the above-mentioned applicable requirements. The RACM shall include, but not be limited to, minimizing drop heights and watering of dusty materials, either prior to dumping or during dumping, and good operating practices to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally effective control measures to ensure compliance.
- j. The above-mentioned control measures shall be employed for each MSW landfill cell if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measures are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measures shall continue during any such operation until further observation confirms that use of the measures is unnecessary.
- k. The permittee shall employ RACM for wind erosion from the surface of the landfill for the purpose of ensuring compliance with the above-mentioned requirements. The RACM shall include, but not be limited to, the watering of portions of the landfill surface area and the watering of dusty loads prior to dumping during periods of high wind speed to ensure compliance.
- l. The above-mentioned control measures shall be for wind erosion from the landfill if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measures are necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measures shall not be necessary for the landfill cell that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.
- m. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit are appropriate and sufficient to satisfy the requirements of OAC rules 3745-17-08(B).
- n. There shall be no visible emissions from asbestos-containing materials during on-site transportation, transfer, unloading, deposition or compacting operations.
- o. Deposition and burial operations shall be conducted in a careful manner that prevents asbestos-containing waste materials from being broken up or dispersed before the materials are buried.
- p. The permittee shall establish restricted access, adequate to deter the unauthorized entry of the general public and any unauthorized personnel, within 100 feet of the unloading, deposition, and burial areas of the asbestos-containing

waste materials. A hazard warning shall be displayed on signs not less than 20 x 14 inches in size, posted so they are visible before entering an area with asbestos waste disposal operations in progress; or, alternatively, mark vehicles used to transport asbestos-containing waste materials with 21 x 14 inch signs so that the signs are displayed in such a manner and location that a person can easily read the legend. Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend:

DANGER
ASBESTOS DUST HAZARD
CANCER AND LUNG DISEASE HAZARD
Authorized Personnel Only

Notation

2.5 cm (1 inch) Sans Serif, Gothic or Block
2.5 cm (1 inch) Sans Serif, Gothic or Block
1.9 cm (3/4 inch) Sans Serif, Gothic or Block
14 Point Gothic

Spacing between any two lines must be at least equal to the height of the upper two lines.

- q. The permittee shall cover and compact asbestos wastes in accordance with the following:
 - i. As soon as practical after the placement of friable asbestos, but no later than the end of each working day, the asbestos-containing waste materials deposited at the site during the operating day shall be covered with at least 12 inches of non-asbestos-containing materials. Once the asbestos-containing materials are covered, the area may be compacted.
 - ii. Care shall be taken to ensure that disposed asbestos shall not be re-excavated in subsequent operations. Any accidentally exposed material shall be immediately covered in accordance with the provisions of condition (p)i. above.
 - iii. Asbestos-containing waste materials shall be separated from the landfill final grade by no less than 24 inches of compacted non-asbestos-containing materials and a permanent cover of vegetation, or in accordance with current requirements for closure, whichever is most stringent.
- r. The permittee shall implement and maintain an "Asbestos Disposal Operating Procedure and Spill Contingency Plan" (Plan) consisting of: authorized personnel training, inspection and disposal operating procedures, non-conforming load response procedures, inventory and maintenance procedures for safety and emission control equipment, record keeping procedures and emergency notification procedures. Authorized personnel shall be knowledgeable in the

procedures, and the Plan shall be available for inspection at this facility at all times.

- s. The permittee shall have emission control equipment available for wetting and containing asbestos in the event of a release or non-conforming load disposal. All equipment required to implement the Plan shall be maintained in accordance with good engineering practices to ensure equipment is in a ready-to-use condition, and in an appropriate location for use.
- t. The permittee shall require that all waste shipments received from NESHAP regulated facilities as defined in 40 CFR 61.141, be accompanied by a Waste Shipment Record as described in 40 CFR 61.150(d)(1). Shipments less than one cubic yard generated by residential sources may be exempted. The waste shipment record forms shall be retained at the facility for at least two years, and shall be made available for inspection upon request.

The waste shipment records shall include, but not be limited to, the following information:

- i. the name, address and telephone number of the waste generator;
 - ii. the name, address and telephone number of the transporter;
 - iii. the quantity of asbestos-containing waste material, in cubic meters (cubic yards);
 - iv. the name and telephone number of the disposal site operator;
 - v. the presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers;
 - vi. the name and physical site location of the disposal site; and
 - vii. the date of receipt.
- u. If this emissions unit is permanently closed, a closure notification, as provided in 40 CFR Part 60.757(d), shall be submitted to the RAPCA. The permittee shall also comply with all applicable provisions of OAC rule 3745-20-07.
 - v. The permittee shall cover all wastes with at least 6 inches of soil or alternative cover at the end of each day.
 - w. All vehicles hauling waste shall be closed or covered upon entering the facility. Following inspection at the facility's entrance the vehicle may remain uncovered while on landfill property and during unloading operations at the working face of the landfill.
 - x. The permittee shall not accept any load of friable asbestos-containing waste material for disposal unless it has been labeled in accordance with the requirements below:

Each container of friable asbestos-containing waste material shall be labeled in accordance with the requirements of the NESHAP at 40 CFR Part 61, Subpart M; or the Ohio Administrative Code rule 3745-20-05; or the Occupational Safety and Health Administration; or the Department of Transportation or any subsequent revision to the preceding rule; and shall contain the following information:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

R.Q. ASBESTOS, CLASS 9
NA 2212, III

Inspection of incoming loads of asbestos-containing material for compliance with proper labeling requirements may occur at the working face of the landfill.

- y. All asbestos-containing waste materials shall be received in sealed, approved, leak-tight waste disposal containers in accordance with b)(2)x.i. or in approved alternative disposal containers in accordance with b)(2)x.ii, b)(2)x.iii., or b)(2)x.iv. below:
- i. Asbestos-containing waste material shall be sealed in plastic bags having a thickness of at least 0.006 inch (six-mils). A second clean, leak tight plastic bag having a thickness of at least 0.006 inch (six-mils) shall fully contain the first bag.
 - ii. Whenever necessary to prevent any asbestos-containing waste material from penetrating a container, the material shall be sealed into a combination of 0.006 inch (six-mils) plastic bag and leak-tight steel, plastic, or fiber drums, or reinforced disposal box, leak-tight polypropylene woven fabric bag, or similar suitable and durable container. Drums shall be fitted with a matching lid and lock-rims, and boxes shall be banded and sealed with reinforced tape or in accordance with manufacturer's recommendations.
 - iii. Non-friable waste materials which have the potential to become friable during handling or disposal operations, and components coated with, covered or containing friable asbestos materials shall be wrapped in no less than 0.012 inch (twelve-mils) of leak tight plastic, or at least 0.01 inch (ten-mils) of leak tight polypropylene fabric. This facility shall not accept wrapped pipes or components for disposal, unless a system for unloading and disposing of the waste without causing emissions of asbestos can be assured.
 - iv. Alternative leak-tight containers or disposal systems for asbestos-containing materials may be approved by RAPCA for special utility. The permittee is authorized to accept any alternative container or load approved in writing by RAPCA. Acceptance of any alternative container or load is at the discretion of the landfill and shall be in accordance with the

terms and conditions issued in the alternative container or disposal system approval as issued in writing by RAPCA.

c) Operational Restrictions

- (1) In accordance with 40 CFR Part 60.753 (a), the permittee shall operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for 5 years or more if active, or for 2 years or more if closed or at final grade.
- (2) In accordance with 40 CFR Part 60.753 (b), the permittee shall operate the collection system with negative pressure at each wellhead except under the following conditions:
 - a. A fire or increased well temperature. (The permittee shall record instances when positive pressure occurs in efforts to avoid a fire.) These records shall be submitted with the annual reports as provided in 40 CFR Part 60.757(f)(1).
 - b. Use of a geomembrane or synthetic cover. (The permittee shall develop acceptable pressure limits in the design plan.)
 - c. A decommissioned well. (A well may experience a static positive pressure after shutdown to accommodate for declining flows. All design changes shall be approved by the Director of Ohio EPA.)
- (3) In accordance with 40 CFR Part 60.753 (c), the permittee shall operate each interior wellhead in the collection system with a landfill gas temperature less than 55 degrees Celsius and with either a nitrogen level less than 20% or an oxygen level less than 5%. The permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.
 - a. The nitrogen level shall be determined using Method 3C unless an alternative test method is established as allowed by 40 CFR Part 60.752(b)(2)(i).
 - b. Unless an alternative test method is established as allowed by 40 CFR Part 60.752(b)(2)(i), the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that:
 - i. The span shall be set so that the regulatory limit is between 20 and 50 percent of span.
 - ii. A data recorder is not required.
 - iii. Only two calibration gases are required, a zero and span, and ambient air may be used as the span.
 - iv. A calibration error check is not required.
 - v. The allowable sample bias, zero drift, and calibration drift are plus or minus 10 percent of span.

- (4) In accordance with 40 CFR Part 60.753 (d), the permittee shall operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill.
 - (5) In accordance with 40 CFR Part 60.753 (e), the permittee shall operate the collection system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR Part 60.752(b)(2)(iii), reference 2.b)(2)b above. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour.
 - (6) In accordance with 40 CFR Part 60.753 (f), the permittee shall operate the control or treatment system at all times when the collected gas is routed to the system.
 - (7) In accordance with 40 CFR Part 60.18(c)(2) and (f)(2), the flare control system shall be operated with a flame present at all times. A flame sensing device shall be maintained at all times in the flare's burner to detect and monitor the presence of a flare pilot flame.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall inspect each load of asbestos containing-material delivered to this facility as follows:
 - a. The inspection shall consist of visual examination to ensure that each shipment of asbestos-containing materials is received in intact, leak-tight containers labeled with appropriate hazard warning labels, the name of the waste generator, and the location of waste generation. The inspector also shall determine whether the waste shipment records (WSR) accompany the consignment and accurately describe the waste material and quantity.
 - b. If on the basis of the inspection, the asbestos-containing waste material is found to be improperly received, the load shall be disposed of in accordance with the procedures in the "Asbestos Spill Contingency Plan," and the discrepancy notation shall be made on the waste shipment record.
 - c. The owner or on-duty operator shall notify the RAPCA of any load of asbestos-containing material which is rejected, or non-conforming in accordance with the Asbestos Spill Contingency Plan. Notification shall be provided as soon as possible by a phone contact, followed in writing the next working day by providing a copy of the waste shipment record, if available, or when waste is not shipped with a WSR, by providing available information on vehicle identification, source of the load, a description of the load, nature of discrepancy, and the location of disposal. If possible, non-conforming loads of suspect friable material shall be detained or the location of disposal protected from damage until the Ohio EPA or RAPCA is informed and provided the opportunity to inspect.
 - (2) The permittee shall maintain records of the following information:
 - a. the waste shipment record form for each shipment of asbestos-containing materials; and

- b. the location, depth and area, and quantity in cubic yards of all asbestos-containing materials within the disposal site, on a map or diagram, or a 3D grid log of the disposal area.
- (3) The permittee shall maintain monthly records of the following information:
- a. records of the LFG flow to the flares, in scf;
 - b. the total NO_x emissions, in tons per month;
 - c. the average monthly NO_x emissions over a 12-month period, i.e., the total NO_x emissions for the present month plus the previous 11 months, in tons, divided by 12 months.
 - d. the total CO emissions, in tons per month;
 - e. the average monthly CO emissions over a 12-month period, i.e., the total CO emissions for the present month plus the previous 11 months, in tons, divided by 12 months.
 - f. the total SO₂ emissions, in tons per month;
 - g. the average monthly SO₂ emissions over a 12-month period, i.e., the total SO₂ emissions for the present month plus the previous 11 months, in tons, divided by 12 months.
 - h. the total PM₁₀ emissions, in tons per month;
 - i. the average monthly PM₁₀ emissions over a 12-month period, i.e., the total PM₁₀ emissions for the present month plus the previous 11 months, in tons, divided by 12 months.
 - j. the total VOC emissions, in tons per month;
 - k. the average monthly VOC emissions over a 12-month period, i.e., the total VOC emissions for the present month plus the previous 11 months, in tons, divided by 12 months.
- (4) In accordance with 40 CFR Part 60.756 (a), when an active gas collection system is employed, the permittee shall install a sampling port and a thermometer or other temperature measuring device at each wellhead and record:
- a. the gauge pressure in the gas collection header on a monthly basis as provided in 60.755(a)(3);
 - b. the nitrogen or oxygen concentration in the landfill gas header on a monthly basis as provided in 60.755(a)(5); and
 - c. the temperature of the landfill gas on a monthly basis as provided in 60.755(a)(5).

(5) After installation of the collection system, in accordance with 40 CFR Part 60.755 (c), the permittee shall monitor surface concentrations of methane on a quarterly basis as follows:

- a. The permittee shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meters intervals (or a site-specific established spacing) for each collection area using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in 40 CFR 60.755(d).

In accordance with 40 CFR 60.753(d), the permittee shall also conduct surface testing where visible observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The permittee may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

- b. The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.
- c. Surface emission monitoring shall be performed in accordance with 40 CFR Part 60, Appendix A, Method 21, section 4.3.1, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.
- d. Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified below shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements listed in 2.c)(4):
 - i. The location of each monitored exceedance shall be marked and the location recorded.
 - ii. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be remonitored within 10 calendar days of detecting the exceedance.
 - iii. If the remonitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the remonitoring shows a third exceedance for the same location, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Ohio EPA

for approval. No further monitoring of that location is required until the action specified has been taken.

- iv. Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day remonitoring specified above shall be remonitored 1 month from the initial exceedance. If the 1-month remonitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month remonitoring shows an exceedance, the actions specified above shall be taken.

- (6) In accordance with 40 CFR Part 60.756 (c), with an open flare control system, the permittee shall install, calibrate, maintain, and operate, according to the manufacturer's specifications, the following equipment for purposes of recording these parameters:
 - a. a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame; and
 - b. a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes.

In accordance with 40 CFR Part 60.756 (c)(2)(ii), if a gas flow rate measuring device is not installed, then the permittee shall 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.

- (7) In accordance with 40 CFR Part 60.755(a), the permittee shall maintain the following information:
 - a. the maximum expected gas generation flow rate as calculated based on the following:
 - i. For sites with unknown year-to-year solid waste acceptance rate:

$$Q_m = 2L_o \times R \times \{(e^{-k_c}) - (e^{-k_t})\}$$

where,

- Q_m = the maximum expected gas generation flow rate, in cubic meters per year;
- L_o = the methane generation potential, in cubic meters per megagram solid waste;
- R = the average annual acceptance rate, in megagrams per year;
- k = the methane generation rate constant, per year;

- t = the age of the landfill at equipment installation plus the time the permittee intends to use the gas mover equipment or active life of the landfill, whichever is less (if the equipment is installed after closure, t is the age of the landfill at installation), in years; and
- c = time since closure, in years (for an active landfill c = 0 and $e^{-kc} = 1$).

ii. For sites with known year-to-year solid waste acceptance rate:

$$Q_m = \sum 2kL_oM_i (e^{-kt_i}); \text{ for } i = 1 \text{ through } i = n$$

where,

- Q_m = the maximum expected gas generation flow rate, in cubic meters per year;
- k = the methane generation rate constant, per year;
- L_o = the methane generation potential, in cubic meters per megagram of solid waste;
- M_i = the mass of solid waste in the ith section, in megagrams; and
- t_i = the age of the ith section, in years.

iii. If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in 2d)(6)a.i. and 2d)(6)a.ii. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in 2.d)(7)a.i. and 2.d)(7)a.ii. or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment. The permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Ohio EPA.

b. the density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR Part 60.759(a)(1) [40 CFR Part 60.758 (b)(1)(ii)].

(8) With an open flare control system, the permittee shall record the following information, in accordance with 40 CFR Part 60.758 (b)(4):

- a. the flare type (i.e., steam-assisted, air-assisted, or non-assisted);
- b. all visible particulate emission readings;
- c. the heat content determinations of the gas;
- d. the flow rate or bypass flow rate measurements; and
- e. the exit velocity determinations made during the performance test as specified in 40 CFR Part 60.18.

- (9) In accordance with 40 CFR Part 60.758 (c)(4), with an open flare control system, the permittee shall properly install, operate, and maintain a device to continuously monitor and record information about the flame or flare pilot flame when the emissions unit is in operation. The monitoring device and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

The permittee shall continuously record the following information:

- a. all periods during which there was no flame or flare pilot flame; and
 - b. the downtime for the flare and monitoring equipment when the collection and control system is in operation.
- (10) In accordance with 40 CFR Part 60.758 (a), the permittee shall keep, for at least 5 years, up-to-date, readily accessible, on-site records of the landfill design capacity report which triggered 40 CFR 60.752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either hardcopy or electronic formats are acceptable. These records, may be also required by the Ohio EPA, Division of Solid and Infectious Waste Management, and shall satisfy this permit condition.
- (11) In accordance with 40 CFR Part 60.758 (d), the permittee shall maintain, for the life of the collection system, an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.
- (12) Except as otherwise provided in this section, the permittee shall perform inspections of all the landfill operation areas daily on days of operation. The purpose of the inspections is to determine the need for implementing the above-mentioned RACM. The inspections shall be performed during representative, normal operating conditions. No inspection shall be necessary for a landfill operating area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.
- (13) The permittee may, upon receipt of written approval from RAPCA, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements. Such modified inspection frequencies would not be considered a minor or significant modification that would be subject to Title V permit modification requirements in paragraph (C)(1) and (C)(3) of OAC rule 3745-77-08.
- (14) The permittee shall maintain records of the following information:
- a. the date and reason that any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

- b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
- c. the dates the control measures were implemented; and
- d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in (13)d. shall be kept for (i) the solid waste unloading operations, (ii) the landfill access roads, and (iii) active landfill working face surface (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

- (1) This facility shall prepare and submit quarterly reports summarizing asbestos disposal activities. Each report shall contain the following information:
 - a. the name, address and location of this facility; the calendar period covered by the report; and changes in methods of storage or disposal operations; and
 - b. a list of all asbestos-containing waste consignments received including:
 - i. the date received;
 - ii. the name, address and telephone number of the waste generator;
 - iii. the name and location of the facility where the load originated;
 - iv. the name, address and telephone number of the transporter;
 - v. the quantity of asbestos-containing waste material received; and
 - vi. any discrepancy or non-conformity discovered.

These reports shall be submitted no later than January 31, April 30, July 31 and October 31 and shall cover the previous calendar quarter.

- (2) As soon as possible and no longer than 30 days after receipt of the waste, the permittee shall send a copy of the signed waste shipment record to the waste generator.
- (3) Upon discovery of a discrepancy between the quantity of waste designated on a waste shipment record and the quantity actually received, the permittee shall attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the RAPCA. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.

- (4) The permittee shall submit, within 60 days of the facility becoming inactive and ceasing accepting waste, a copy of the records of the asbestos waste disposal locations and quantities to the RAPCA.
- (5) The permittee shall notify the RAPCA in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. The following information shall be included in the notice:
 - a. scheduled starting and completion dates;
 - b. reason for disturbing the waste;
 - c. procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material (if deemed necessary, the Director may require changes in the proposed emission control procedures); and
 - d. location of any temporary storage site and the final disposal site.
- (6) In accordance with 40 CFR Part 60.757 (b)(1), the permittee shall submit annual NMOC emission rate reports to the RAPCA. The reports shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in 40 CFR Part 60.754(a) or (b), as applicable, and all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions. These annual reports shall be submitted by June 10 in accordance with NSPS of each year and cover the previous calendar year.

In accordance with 40 CFR Part 60.757 (b)(3), the permittee is exempted from the above requirements after the installation and continued operation of a compliant collection and control system.
- (7) In accordance with 40 CFR Part 60.757 (b)(1)(ii), if the estimated NMOC emission rate, as reported in the annual report to the RAPCA, is less than 50 megagrams (55 tons) per year in each of the next 5 consecutive years, the permittee may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the RAPCA. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the RAPCA. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

In accordance with 40 CFR Part 60.757 (b)(3), the permittee is exempted from the above requirements, after the installation and continued operation of a compliant collection and control system.

- (8) In accordance with 40 CFR Part 60.757 (d), the permittee shall submit a closure report to the RAPCA within 30 days of waste acceptance cessation. The Ohio EPA or RAPCA may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR Part 258.60. If a closure report has been submitted to the Ohio EPA, no additional wastes may be placed into the landfill without filing a notification of modification as described in 40 CFR Part 60.7(a)(4).
- (9) The permittee shall submit deviation (excursion) reports to the RAPCA that identify any of the following:
 - a. each day of operation during which an inspection was not performed, as required in d)(12), by the required frequency, excluding an inspection which was not performed during an exemption for snow and/or ice cover or precipitation; and
 - b. each instance when a control measure that was to be implemented as a result of an inspection, was not implemented.
- (10) In accordance with 40 CFR Part 60.757(f), the permittee shall submit an initial report within 180 days of the installation and start-up of the collection and control system and shall include the initial performance test report required under 40 CFR Part 60.8. In accordance with the Tier 2 Landfill Gas Sampling Report notification dated June 9, 2003, the permittee is required to submit this report by June 10, 2006. Pursuant to 63.1980 this report shall be submitted every 6 months thereafter. The first report after issuance of this permit shall be completed to set the reporting period equal to the standard reporting periods (January 1-June 30 and July 1-December 31). Therefore, one additional "short" report will be required which will include data between May 10-June 30 or November 10-December 31, whichever period occurs first. Thereafter, the reporting deadlines will be January 31 and July 31 of each year and include the following:
 - a. all periods when the collection system was not operating in excess of 5 days;
 - b. all periods when the control device was not operating for a period exceeding 1 hour and the length of time the control device was not operating;
 - c. any record indicating the date of installation and the location of each well or collection system expansion added pursuant to 40 CFR Part 60.755(a)(3), (b), and (c)(4);
 - d. any record which indicates that the gauge pressure in the gas collection header at each individual well was positive except for the three conditions allowed under 40 CFR Part 60.753(b);
 - e. any record which indicates that the nitrogen or oxygen concentration in the landfill gas at each interior wellhead in the collection system was greater than

- 20% or 5%, respectively, unless a higher operating value is established in accordance with 40 CFR Part 60.753(c);
- f. any record which indicates that the temperature of the landfill gas at each interior wellhead in the collection system was greater than 55 degrees Celsius, unless a higher operating value is established in accordance with 40 CFR Part 60.753(c);
 - g. any record which indicates that the surface concentration of methane was greater than 500 parts per million above background, if applicable, unless a higher operating value is established in accordance with 40 CFR Part 60.753(c);
 - h. all periods during which the flare pilot flame was not functioning properly (the reports shall include the date, time, and duration of each such period); and
 - i. all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow or any record which indicates that the bypass line valve was not maintained in the closed position.
- (11) In accordance with 40 CFR Part 60.757 (g), the permittee shall submit the following information with the initial performance test report required pursuant to 40 CFR Part 60.8:
- a. a diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;
 - b. the data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;
 - c. the documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;
 - d. the sum of the gas generation flow rate for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area;
 - e. the provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and
 - f. the provisions for the control of off-site migration.
- (12) The permittee shall submit quarterly deviation (excursion) reports that identify any deviations from the emission limitations. The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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

Fugitive NMOC emissions from this emissions unit shall not exceed 2.60 tons/month averaged over a 12-month rolling period.

Applicable Compliance Method

The emission limitation above was established by using AP-42, Chapter 2.4 Municipal Solid Waste Landfills [11/98] and the following equation:

$$\frac{5,970 \text{ ft}^3}{\text{min}} * \frac{\text{lb} - \text{mol}}{385.4 \text{ ft}^3} * \frac{86 \text{ lbs}}{\text{lb} - \text{mol}} * \frac{595 \text{ ppmv}}{1,000,000} * \frac{60 \text{ min}}{1 \text{ hr}} * (1 - 0.85) * \frac{8,760 \text{ hrs}}{1 \text{ yr}} * \frac{1 \text{ ton}}{2,000 \text{ lbs}} * \frac{1 \text{ yr}}{12 \text{ months}} = 2.60 \frac{\text{tons}}{\text{month}}$$

Where:

$\frac{5,970 \text{ ft}^3}{\text{min}}$ = the maximum landfill gas generation rate

$\frac{\text{lb} - \text{mol}}{385.4 \text{ ft}^3}$ = the number of cubic feet in a pound-mole of landfill gas at standard temperature and pressure

$\frac{86 \text{ lbs}}{\text{lb} - \text{mol}}$ = the molecular weight of NMOC (as Hexane) per AP-42, Chapter 2.4

$\frac{595 \text{ ppmv}}{1,000,000}$ = the default concentration for NMOC in inlet gas at No or Unknown co-disposal sites per AP-42, Chapter 2.4

$(1 - 0.85)$ = the fugitive fraction of gas (1- the typical gas collection efficiency)

The actual fugitive emissions shall be calculated by utilizing the actual landfill gas flow and the following equation:

$$\frac{\text{LFG ft}^3}{\text{month}} * \frac{\text{lb} - \text{mol}}{385.4 \text{ ft}^3} * \frac{86 \text{ lbs}}{\text{lb} - \text{mol}} * \frac{595 \text{ ppmv}}{1,000,000} * (1 - .85) * \frac{1 \text{ ton}}{2,000 \text{ lbs}} = \frac{\text{NMOC tons}}{\text{month}}$$

Where:

$\frac{\text{LFG ft}^3}{\text{month}}$ = volume of landfill gas collected

- $\frac{lb - mol}{385.4 ft^3} =$ the number of cubic feet in a pound-mole of landfill gas at standard temperature and pressure
- $\frac{86 lbs}{lb - mol} =$ the molecular weight of NMOC (as Hexane) per AP-42, Chapter 2.4
- $\frac{595 ppmv}{1,000,000} =$ the default concentration for NMOC in inlet gas at No or Unknown co-disposal sites per AP-42, Chapter 2.4
- 0.85 = the typical gas collection efficiency

b. Emission Limitation

3.80 tons/month NO_x averaged over a 12-month rolling period

Applicable Compliance Method

The emission limitation above was established by using the following equation:

$$\frac{5,100 ft^3 LFG}{min} * \frac{500 Btu}{1 ft^3 LFG} * \frac{0.068 lbs}{10^6 Btu} * \frac{60 min}{1 hr} * \frac{8,760 hrs}{1 yr} * \frac{1 ton}{2,000 lbs} * \frac{1 yr}{12 months} = 3.80 \frac{tons NO_x}{month}$$

Where:

- $\frac{5,100 ft^3 LFG}{min} =$ The maximum landfill gas collection rate
- $\frac{500 Btu}{1 ft^3 LFG} =$ The typical heating value of LFG
- $\frac{0.068 lbs NO_x}{10^6 Btu} =$ the emission factor for NO_x for flare operations per AP-42, Chapter 13.5 Industrial Flares [4/15]

The actual emissions shall be calculated by utilizing the following equation:

$$\frac{LFG ft^3}{month} * \frac{Btu}{1 ft^3 LFG} * \frac{0.068 lbs NO_x}{10^6 Btu} * \frac{1 ton}{2,000 lbs} = \frac{tons NO_x}{month}$$

Where:

- $\frac{LFG ft^3}{month} =$ volume of landfill gas collected
- $\frac{Btu}{1 ft^3 LFG} =$ average heating value of LFG during the period
- $\frac{0.068 lbs NO_x}{10^6 Btu} =$ the emission factor for NO_x for flare operations per AP-42, Chapter 13.5 Industrial Flares [4/15]

e. Emission Limitation:

17.31 tons/month CO averaged over a 12-month rolling period

Applicable Compliance Method:

The emission limitation above was established by using the following equation:

$$\frac{5,100 \text{ ft}^3 \text{ LFG}}{\text{min}} * \frac{500 \text{ Btu}}{1 \text{ ft}^3 \text{ LFG}} * \frac{0.310 \text{ lbs}}{10^6 \text{ Btu}} * \frac{60 \text{ min}}{1 \text{ hr}} * \frac{8,760 \text{ hrs}}{1 \text{ yr}} * \frac{1 \text{ ton}}{2,000 \text{ lbs}} * \frac{1 \text{ yr}}{12 \text{ months}}$$

$$= 17.31 \frac{\text{tons CO}}{\text{month}}$$

Where:

| | |
|--|--|
| $\frac{5,100 \text{ ft}^3 \text{ LFG}}{\text{min}} =$ | The maximum landfill gas collection rate |
| $\frac{500 \text{ Btu}}{1 \text{ ft}^3 \text{ LFG}} =$ | The typical heating value of LFG |
| $\frac{0.310 \text{ lbs CO}}{10^6 \text{ Btu}} =$ | the emission factor for CO for flare operations per AP-42, Chapter 13.5 Industrial Flares [4/15] |

The actual emissions shall be calculated by utilizing the following equation:

$$\frac{\text{LFG ft}^3}{\text{month}} * \frac{\text{Btu}}{1 \text{ ft}^3 \text{ LFG}} * \frac{0.310 \text{ lbs CO}}{10^6 \text{ Btu}} * \frac{1 \text{ ton}}{2,000 \text{ lbs}} = \frac{\text{tons CO}}{\text{month}}$$

Where:

| | |
|---|--|
| $\frac{\text{LFG ft}^3}{\text{month}} =$ | volume of landfill gas collected |
| $\frac{\text{Btu}}{1 \text{ ft}^3 \text{ LFG}} =$ | average heating value of LFG during the period |
| $\frac{0.310 \text{ lbs CO}}{10^6 \text{ Btu}} =$ | the emission factor for CO for flare operations per AP-42, Chapter 13.5 Industrial Flares [4/15] |

d. Emission Limitation:

0.92 ton/month SO₂ averaged over a 12-month rolling period

Applicable Compliance Method:

The emission limitation above was established by using the following equation:

$$\frac{5,100 \text{ ft}^3}{\text{min}} * \frac{\text{lb} - \text{mol}}{385.4 \text{ ft}^3} * \frac{64 \text{ lbs}}{\text{lb} - \text{mol}} * \frac{49.59 \text{ ppmv}}{1,000,000} * \frac{60 \text{ min}}{1 \text{ hr}} * \frac{8,760 \text{ hrs}}{1 \text{ yr}} * \frac{1 \text{ ton}}{2,000 \text{ lbs}} * \frac{1 \text{ yr}}{12 \text{ months}} = 0.92 \frac{\text{tons SO}_2}{\text{month}}$$

Where:

| | |
|---|---|
| $\frac{5,100 \text{ ft}^3 \text{ LFG}}{\text{min}} =$ | The maximum landfill gas collection rate |
| $\frac{64 \text{ lbs}}{\text{lb} - \text{mol}} =$ | the molecular weight of sulfur dioxide |
| $\frac{\text{lb} - \text{mol}}{385.4 \text{ ft}^3} =$ | the number of cubic feet in a pound-mole of landfill gas at standard temperature and pressure |
| $\frac{49.59 \text{ ppmv}}{1,000,000} =$ | assumed sulfur compound concentration in the exhaust gas |

The actual emissions shall be calculated by utilizing the following equation:

$$\frac{\text{LFG ft}^3}{\text{month}} * \frac{\text{lb} - \text{mol}}{385.4 \text{ ft}^3} * \frac{64 \text{ lbs}}{\text{lb} - \text{mol}} * \frac{49.59 \text{ ppmv}}{1,000,000} * \frac{1 \text{ ton}}{2,000 \text{ lbs}} = \frac{\text{tons SO}_2}{\text{month}}$$

Where:

| | |
|---|---|
| $\frac{\text{LFG ft}^3}{\text{month}} =$ | volume of landfill gas collected |
| $\frac{64 \text{ lbs}}{\text{lb} - \text{mol}} =$ | the molecular weight of sulfur dioxide |
| $\frac{\text{lb} - \text{mol}}{385.4 \text{ ft}^3} =$ | the number of cubic feet in a pound-mole of landfill gas at standard temperature and pressure |
| $\frac{49.59 \text{ ppmv}}{1,000,000} =$ | assumed sulfur compound concentration in the exhaust gas |

e. Emission Limitation:

0.87 ton/month PM₁₀ averaged over a 12-month rolling, period

Applicable Compliance Method:

The emission limitation above was established by using the following equation:

$$\frac{5,100 \text{ ft}^3}{\text{min}} * (1 - 0.08) * \frac{17 \text{ lbs } \frac{PE}{PM_{10}}}{10^6 \text{ ft}^3 \text{ methane}} * \frac{0.50 \text{ ppm methane}}{1 \text{ ppm LFG}} * \frac{60 \text{ min}}{1 \text{ hr}} * \frac{8,760 \text{ hrs}}{1 \text{ yr}} * \frac{1 \text{ ton}}{2,000 \text{ lbs}} * \frac{1 \text{ yr}}{12 \text{ months}} = 0.87 \frac{\text{tons PM}_{10}}{\text{month}}$$

Where:

- $\frac{5,100 \text{ ft}^3 \text{ LFG}}{\text{min}}$ The maximum landfill gas collection rate
- 0.08 the assumed moisture fraction of the landfill gas
- $\frac{17 \text{ lbs } PE/PM_{10}}{10^6 \text{ ft}^3 \text{ dscf methane}}$ the mass of PE/PM₁₀ per volume of methane per AP-42, Chapter 2.4
- $\frac{0.50 \text{ ppm methane}}{1 \text{ ppm LFG}}$ = the estimated LFG methane concentration as provided by permittee

The actual emissions shall be calculated by utilizing the following equation:

$$\frac{\text{LFG } \text{ft}^3}{\text{month}} * (1 - 0.08) * \frac{17 \text{ lbs } \frac{PE}{PM_{10}}}{10^6 \text{ ft}^3 \text{ methane}} * \frac{\text{ppm methane}}{1 \text{ ppm LFG}} * \frac{1 \text{ ton}}{2,000 \text{ lbs}} = \frac{\text{tons PM}_{10}}{\text{month}}$$

Where:

- $\frac{\text{LFG } \text{ft}^3}{\text{month}}$ = volume of landfill gas collected
- 0.08 the assumed moisture fraction of the landfill gas
- $\frac{17 \text{ lbs } PE/PM_{10}}{10^6 \text{ ft}^3 \text{ dscf methane}}$ the mass of PE/PM₁₀ per volume of methane per AP-42, Chapter 2.4
- $\frac{\text{ppm methane}}{1 \text{ ppm LFG}}$ = the average LFG methane concentration during the period

f. Emission Limitation:

0.12 tons/month VOC averaged over a twelve-month rolling period.

Applicable Compliance Method:

The emission limitation above was established by using the following equation:

$$\frac{5,100 \text{ ft}^3}{\text{min}} * \frac{\text{lb} - \text{mol}}{385.4 \text{ ft}^3} * \frac{86 \text{ lbs}}{\text{lb} - \text{mol}} * \frac{232 \text{ ppmv}}{1,000,000} * \frac{60 \text{ min}}{1 \text{ hr}} * (1 - 0.98) * \frac{8,760 \text{ hrs}}{1 \text{ yr}} * \frac{1 \text{ ton}}{2,000 \text{ lbs}} * \frac{1 \text{ yr}}{12 \text{ months}} = 0.12 \frac{\text{tons VOC}}{\text{month}}$$

Where:

$\frac{5,100 \text{ ft}^3}{\text{min}}$ = the maximum landfill gas flow rate to the control devices

$\frac{\text{lb} - \text{mol}}{385.4 \text{ ft}^3}$ = the number of cubic feet in a pound-mole of landfill gas at standard temperature and pressure

$\frac{86 \text{ lbs}}{\text{lb} - \text{mol}}$ = the molecular weight of NMOC (as Hexane) per AP-42, Chapter 2.4

$\frac{232 \text{ ppmv}}{1,000,000}$ = the default VOC content which is equal to 39% by weight of the NMOC concentration (595 ppmv) in inlet gas at No or Unknown co-disposal sites per AP-42, Chapter 2.4

$(1 - 0.98)$ = the typical destruction efficiency of flare

The actual emissions shall be calculated by utilizing the following equation:

$$\frac{\text{LFG ft}^3}{\text{month}} * \frac{\text{lb} - \text{mol}}{385.4 \text{ ft}^3} * \frac{86 \text{ lbs}}{\text{lb} - \text{mol}} * \frac{232 \text{ ppmv}}{1,000,000} * (1 - 0.98) * \frac{1 \text{ ton}}{2,000 \text{ lbs}} = \frac{\text{tons VOC}}{\text{month}}$$

Where:

$\frac{\text{LFG ft}^3}{\text{month}}$ = volume of landfill gas collected

$\frac{\text{lb} - \text{mol}}{385.4 \text{ ft}^3}$ = the number of cubic feet in a pound-mole of landfill gas at standard temperature and pressure

$\frac{86 \text{ lbs}}{\text{lb} - \text{mol}}$ = the molecular weight of NMOC (as Hexane) per AP-42, Chapter 2.4

$\frac{232 \text{ ppmv}}{1,000,000}$ = the default VOC content which is equal to 39% by weight of the NMOC concentration (595 ppmv) in inlet gas at No or Unknown co-disposal sites per AP-42, Chapter 2.4

$(1 - 0.98)$ = the typical destruction efficiency of flare

g. Emission Limitation

There shall be no visible emissions from asbestos-containing materials during on-site transportation, transfer, unloading, deposition or compacting operations.

Applicable Compliance Method

Compliance shall be demonstrated by satisfying the requirements specified in b)(1) and b)(2). If required, compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 22 and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

h. Emission Limitation

Visible emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average, from all waste materials, except asbestos-containing materials.

Applicable Compliance Method

If required, compliance shall be determined through visible emission observations performed in accordance U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

i. Emission Limitation

Flares shall be designed and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

Applicable Compliance Method

If required, compliance with this limitation shall be determined through visible emission observations performed in accordance U.S. EPA Method 22.

- (2) In accordance with 40 CFR Part 60.753 (c)(1), the permittee shall determine the nitrogen level by using Method 3C of 40 CFR Part 60, Appendix A, unless an alternative test method is established as allowed by 40 CFR Part 60.752(b)(2)(i).
- (3) In accordance with 40 CFR Part 60.753 (c)(2), the permittee shall determine the oxygen level by an oxygen meter using Method 3A of 40 CFR Part 60, Appendix A, unless an alternative test method is established as allowed by 40 CFR Part 60.752(b)(2)(i), except that:
 - a. the span shall be set so that the regulatory limit is between 20 and 50% of the span;
 - b. a data recorder is not required;
 - c. only two calibration gases are required, a zero and span, and ambient air may be used as the span;
 - d. a calibration error check is not required; and
 - e. the allowable sample bias, zero drift, and calibration drift are plus or minus 10%.

- (4) The permittee shall conduct or have conducted, within 180 days after the installation of the collection and control system, an initial performance test to demonstrate the flares can operate in conformance with the requirements specified in 40 CFR Part 60.18 and in accordance with 2.b)(2)c. The net heating value of the gas being combusted in the flare and the actual exit velocity of the flare shall be determined in accordance with the procedures and methods specified in 40 CFR Part 60.18. The visible emission evaluation shall be conducted in accordance with the procedures specified in f)(1)i. This requirement was met on May 17, 2006 during a compliance test with the primary flare (3,500 cfm).
- (5) After the installation of a collection and control system in compliance with 40 CFR Part 60.755, the permittee shall calculate the NMOC emission rate for the purpose of determining when the system can be removed as provided in 40 CFR Part 60.752(b)(2)(v) in accordance with the equation and procedures specified in 40 CFR Part 60.754(b), (b)(1), and (b)(2). The permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Ohio EPA as provided in 40 CFR Part 60.752(b)(2)(i)(B).
- (6) The permittee shall conduct, or have conducted, emission testing for secondary flare (3,000 cfm) in accordance with the following requirements:
 - a. The emission testing shall be conducted within 180 days after start-up of the secondary flare.
 - b. The emission testing shall be conducted to demonstrate compliance with the performance requirements and visible emission limitations specified in b)(2)c., including the requirements of 40 CFR Part 60, Subpart WWW, and 60.18.
 - c. Visible emission testing of open utility flares shall be conducted in accordance with the methods specified in Method 22 of 40 CFR Part 60, Appendix A, including 60.18(f) and Subpart WWW.
 - d. The net heating value of the gas being combusted in the flare and the actual exit velocity of the flare shall be determined in accordance with the procedures and methods specified in 40 CFR Part 60.18.
 - e. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - f. During the emissions testing, the emissions unit shall be operated under operational conditions approved in advance by the appropriate Ohio EPA District Office or local air agency. Operational conditions that may need to be approved include, but are not limited to, the production rate, the type of material processed, material make-up (solvent content, etc.), or control equipment operational limitations (burner temperature, precipitator voltage, etc.). In general, testing shall be done under “worst case” conditions expected during the life of the permit. As part of the information provided in the “Intent to Test” notification form described below, the permittee shall provide a description of the emissions unit operational conditions they will meet during the emissions testing and describe why they believe “worst case” operating conditions will be met. Prior to

conducting the test(s), the permittee shall confirm with the appropriate Ohio EPA District Office or local air agency that the proposed operating conditions constitute "worst case". Failure to test under the approved conditions may result in Ohio EPA not accepting the test results as a demonstration of compliance.

- g. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. 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 District Office's or local air agency's refusal to accept the results of the emission test(s).
- h. Personnel from the appropriate Ohio EPA District Office or local air agency 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.
- i. 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

g) **Miscellaneous Requirements**

- (1) Any representative of the Director of the Ohio EPA may, upon presentation of proper identification, enter upon any portion of the property including any improvements thereon, at any reasonable time, to make inspections, take samples, conduct tests and examine records or reports pertaining to any emission of air contaminants and any monitoring equipment, emission control equipment or methods. No operator or agent of this facility shall act in any manner to refuse, hinder, or thwart legal right of entry.