State of Ohio Environmental Protection Agency

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Columbus, OH 43216-1049

5/26/2009

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

RE: PROPOSED AIR POLLUTION TITLE V PERMIT
Facility Name: Hoffman Road Landfill
Facility ID: 0448011576
Permit Type: Minor Permit Modification
Permit Number: P0104920

Dear Ms. Blakley:

A proposed OAC Chapter 3745-77 Title V permit for the referenced facility has been issued for review by U.S. EPA. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page http://www.epa.state.oh.us/dapc in Microsoft Word and Adobe Acrobat format. If U.S. EPA does not object to this proposed permit, the permit will be processed for issuance as a final action not less than 45 days from the date of this letter. Please contact me at (614) 644-3631 by the end of the 45 day review period if you wish to object to the proposed permit.

Sincerely,

Michael W. Ahern

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

Cc: Toledo Department of Environmental Services

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

PROPOSED

Air Pollution Title V Permit
for
Hoffman Road Landfill

Facility ID: 0448011576
Permit Number: P0104920
Permit Type: Minor Permit Modification
Issued: 5/26/2009
Effective: To be entered upon final issuance
Expiration: To be entered upon final issuance

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Air Pollution Title V Permit
for
Hoffman Road Landfill

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Authorization

Facility ID: 0448011576
Facility Description: Municipal solid waste landfill expansion, Addition of gas collection and disposal system (flare) modification.
Application Number(s): A0037319
Permit Number: P0104920
Permit Description: Municipal solid waste landfill expansion, Addition of gas collection and disposal system (flare) modification.
Permit Type: Minor Permit Modification
Issue Date: 5/26/2009
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Superseded Permit Number:

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

Hoffman Road Landfill
4545 Hoffman Rd
Toledo, OH 43611

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

Toledo Department of Environmental Services
348 South Erie Street
Toledo, OH 43604
(419)936-3015

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Toledo Department of Environmental Services. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months (540 days) and no later than 6 months (180 days) prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski
Director

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions

(2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions

(3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting

(4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
(Authority for term: ORC 3704.036(A))

2. Monitoring and Related Record Keeping and Reporting Requirements

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c) The permittee shall submit required reports in the following manner:

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

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

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

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

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

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

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

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

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

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

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

See A.29 below if no deviations occurred during the quarter.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

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

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

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

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

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.
(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))

(4) Each written report shall be signed by a responsible official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."
(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

(5) Reports of any required monitoring and/or record keeping information shall be submitted to Toledo Department of Environmental Services.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

4. Risk Management Plans

If applicable, the permittee shall develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. ("Act"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or

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

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

5. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.
(Authority for term: OAC rule 3745-77-07(A)(5))

6. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
(Authority for term: OAC rule 3745-77-07(A)(6))

7. General Requirements

a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.

b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with Standard Term and Condition A.11 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d) This permit does not convey any property rights of any sort, or any exclusive privilege.

e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:

(1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

(2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or

(3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminent sources once this permit ceases to be enforceable. The permittee

shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.
(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))

8. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.
(Authority for term: OAC rule 3745-77-07(A)(8))

9. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.
(Authority for term: OAC rule 3745-77-07(A)(9))

10. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these standard terms and conditions shall apply to all operating scenarios authorized in this permit.
(Authority for term: OAC rule 3745-77-07(A)(10))

11. Reopening for Cause

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

a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.

c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.

d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

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

12. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

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

13. Compliance Requirements

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

b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

(1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c) The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the

Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:

(1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted (i.e., postmarked) on or before April 30th of each year during the permit term.

(2) Compliance certifications shall include the following:

(a) An identification of each term or condition of this permit that is the basis of the certification.

(b) The permittee's current compliance status.

(c) Whether compliance was continuous or intermittent.

(d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.

(e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.

(3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

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

14. Permit Shield

a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

b) This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

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

15. Operational Flexibility

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

soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).
(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

16. Emergencies

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

17. Off-Permit Changes

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

a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.

b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).

d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

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

18. Compliance Method Requirements

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

19. Insignificant Activities or Emissions Levels

Each IEU that has one or more applicable requirements shall comply with those applicable requirements.
(Authority for term: OAC rule 3745-77-07(A)(1))

20. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.
(Authority for term: OAC rule 3745-77-07(A)(1))

21. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.
(Authority for term: OAC rule 3745-77-07(A)(1))

22. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the responsible official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the responsible official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

No emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.
(Authority for term: OAC rule 3745-77-01)

23. Title VI Provisions

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

a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.

b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.

c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

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

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

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

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

25. Records Retention Requirements Under State Law Only

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

26. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports

pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.
(Authority for term: OAC rule 3745-77-07(C))

27. Scheduled Maintenance/Malfunction Reporting

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

28. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.
(Authority for term: OAC rule 3745-77-01(C))

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

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

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

a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or

b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; or

c) where the company's responsible official has certified that an emissions unit has been permanently shut down.

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

   a) None.

C. Emissions Unit Terms and Conditions

1. F001, Roadways & Parking Lots

Operations, Property and/or Equipment Description:

Paved and unpaved roadways, and parking areas.

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 operations(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. 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
all paved and unpaved roadways, and parking areas		
a.	OAC rule 3745-31-05(A)(3) established by PTI 04-01190 as issued 9/29/99	5.1 tons per year of particulate emissions less than or equal to 10 microns in diameter (PM10) for all paved and unpaved roadways and parking areas
paved roadways and parking areas see b)(2)a. for an identification of the affected areas		
b.	OAC rule 3745-31-05(A)(3) established by PTI 04-01190 as issued 9/29/99	no visible particulate emissions except for a period of time not to exceed one minute during any sixty-minute observation period for any paved roadway or parking area best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust see b)(2)c. and b)(2)e. through b)(2)h.
c.	OAC rule 3745-17-07(B)(4)	the emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3)
d.	OAC rule 3745-17-08(B)	see b)(2)i.
unpaved roadways and parking areas see b)(2)b. for an identification of the affected areas		
e.	OAC rule 3745-31-05(A)(3) established in PTI 04-01190 as issued 9/29/99	no visible particulate emissions except for a period of time not to exceed three minutes during any sixty-minute observation period for any unpaved

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		roadway or parking area see b)(2)d. through b)(2)h.
f.	OAC rule 3745-17-07(B)(5)	the emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3)
g.	OAC rule 3745-17-08(B)	see b)(2)i.

(2) Additional Terms and Conditions

a. The paved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:

paved roadways: entrance roads (Area B); and

paved parking areas: employee parking area, area around building (Area A) and future parking area (Area E).

b. The unpaved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:

unpaved roadways: haul road to disposal area (Area C); and

unpaved parking area: small hauler's drop off area (Area D) .

c. The permittee shall employ best available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the paved roadways and parking areas by good housekeeping and sweeping at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

d. The permittee shall employ best available control measures on all unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved roadways and parking areas with water or by the reapplication of aggregate at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

e. The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for a paved or unpaved roadway or parking 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. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

f. Any unpaved roadway or parking area, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled with the control measure(s) specified above for paved surfaces. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to the visible emission limitation for paved roadways and parking areas.

g. The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.

h. Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.

i. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.

c) Operational Restrictions

(1) When a dust suppressant is used for controlling fugitive dust from the unpaved road segments and parking areas, the following restrictions shall be followed:

a. The permittee shall certify or possess certification that all dust suppressants used to control fugitive dust meet the PCB limitations set forth in 40 CFR 761, and that there are no listed hazardous wastes or characteristic hazardous wastes as set forth in 40 CFR 261.

b. The permittee shall not apply used oil as defined by OAC rule 3745-279-01(A)(12) as a dust suppressant.

c. The dust suppressant shall be applied in such a manner as to prevent pollution of waters of the State as required by the Ohio Revised Code, section 6111.

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

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform daily inspections of all roadways and parking areas.

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

(2) The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking 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

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

(3) The permittee may, upon receipt of written approval from the Toledo Division of Environmental Services (TDOES), 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 the Title V permit modification requirements in paragraphs (C)(1) and (C)(3) of OAC rule 3745-77-08.

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

(4) The permittee shall maintain records of the following information:

a. the date and reason 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 d)(4)d. above, shall be kept separately for (i) the paved roadways and parking areas and (ii) the unpaved roadways and parking areas, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

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

e) Reporting Requirements

(1) The permittee shall submit deviation reports that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to 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.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-15-03(B)(1)(a)] and [OAC rule 3745-15-03(C)] and [OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

No visible particulate emissions except for a period of time not to exceed one minute during any sixty-minute observation period for any paved roadway or parking area.

No visible particulate emissions except for a period of time not to exceed three minutes during any sixty-minute observation period for any unpaved roadway or parking area.

Applicable Compliance Method:

Compliance with the visible emission limitation for the paved and unpaved roadways and parking areas identified above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources," as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

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

b. Emission Limitation:

5.1 tons per year of PM10

Applicable Compliance Method:

Compliance with fugitive PE limitations shall be determined by using the emission factor equations in Section 13.2.1, in Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1 (revised 11/06) for paved roadways and the emission factor equations in Section 13.2.2, in Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1 (revised 12/03) for unpaved roadways. Should further updates in AP-42 occur, the most current equations shall be used. These emission limits were based on a 70% effective control efficiency for dust suppression.

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

g) Miscellaneous Requirements

(1) None.

2. F002, Landfill

Operations, Property and/or Equipment Description:

Municipal Solid Waste Landfill

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 operations(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. 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
municipal solid waste (MSW) landfill equipped with an active gas collection and open flare control system (identified as P901 in PTI 04-01190)		
a.	40 CFR Part 60, Subpart A	see b)(2)a.
b.	40 CFR Part 60, Subpart WWW	see b)(2)b. through b)(2)l.
c.	40 CFR Part 63, Subpart A	see b)(2)m. and b)(2)n.
d.	40 CFR Part 63, Subpart AAAA	see b)(2)o. through b)(2)q.
stack emissions (controlled emissions from the flare)		
e.	OAC rule 3745-31-05(A)(3) established by PTI 04-01190 as modified 12/04/01 and identified as P901 in that permit	43.2 pounds per hour of carbon monoxide (CO) 189.1 tons per year of CO 2.33 pounds per hour of nitrogen oxides (NO_x) 10.24 tons per year of NO_x 0.97 pound per hour of particulate emissions (PE) 4.25 tons per year of PE 0.8 pound per hour of sulfur dioxide (SO_2) 3.53 tons per year of SO_2 0.3 pound per hour of nonmethane organic compounds (NMOC) 1.2 tons per year of NMOC 0.01 pound per hour of chlorine gas (Cl_2) 0.03 ton per year of Cl_2

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		0.01 pound per hour of hydrochloric acid (HCl) 0.036 ton per year of HCl 47.3 pounds per hour of methane 207 tons per year of methane see b)(2)r.
f.	OAC rule 3745-17-07(A)(1)	see b)(2)s.
fugitive landfill emissions		
g.	OAC rule 3745-31-05(A)(3) established by PTI 04-01190 as modified 12/04/01 and identified as P901 in that permit	1.93 tons per year of PE 11.9 tons per year of particulate emissions less than or equal to 10 microns in diameter (PM10) 7.8 tons per year tons per year VOC 20 tons per year of NMOC 3446 tons per year methane 0.6 ton per year Cl_2 see b)(2)t. through b)(2)z.
h.	OAC rule 3745-17-07(B)(1)	visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average
i.	OAC rule 3745-17-08(B)	see b)(2)aa.

(2) Additional Terms and Conditions

a. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to emissions units affected by 40 CFR Part 60.

b. The permittee shall install a collection and control system, that captures the gas generated within the landfill as required in 40 CFR 60.752(b)(2), this permit, and as submitted in the design plan approved by the Director (the Toledo Division of Environmental Services). The collection and control system shall route all the collected gas to one of the following control devices:

i. an open flare designed and operated in accordance with 40 CFR 60.18; or

ii. a treatment system that processes the collected gas for subsequent sale or use, with a collection and control system that either reduces the NMOC by 98 percent by weight or reduces the outlet NMOC concentration to less than 20 ppm by volume, on a dry basis as hexane at 3% oxygen,

which would include a flare meeting the requirements of 40 CFR 60.18. The reduction efficiency or ppm by volume shall be established by an initial performance test of the landfill gas powered combustion turbine owned and operated by the City of Toledo, Division of Water Reclamation premise number 0448010737, as required for emissions unit P109 in PTI 04-01485 as issued 2/12/2008, to be completed no later than 180 days after the initial startup of the approved control system, using the test methods specified as specified in 40 CFR 60.754(d).

The collection and control system shall be installed as specified in the approved design plan, as required in 40 CFR 60.752(b)(2), and shall be operated to comply with 40 CFR 60, Subpart WWW in accordance with the provisions of 40 CFR 60.753, 60.755, and 60.756, which are reflected in this permit.

[Authority for term: 40 CFR 60.752(b)]

c. The permittee shall operate the active collection and control system to capture the gas generated within the landfill and route all the collected gas to either:

i. the open flare, which is designed and operated in accordance with 40 CFR 60.18; or

ii. the gas treatment system, which shall process the collected gas for subsequent sale or use, with a collection system (operated by the Hoffman Road Landfill) and control system (owned and operated by the City of Toledo, Division of Water Reclamation premise number 0448010737, emissions unit P109) that either reduces the NMOC by 98 percent by weight or reduces the outlet NMOC concentration to less than 20 ppm by volume, on a dry basis as hexane at 3% oxygen, which would include a flare meeting the requirements of 40 CFR 60.18.

The collection and control system shall be operated to comply with 40 CFR 60, Subpart WWW in accordance with the provisions of 40 CFR sections 60.752, 60.753, 60.755, and 60.756, which are reflected in this permit.

[Authority for term: 40 CFR 60.752(b)(2)(iii) and (iv)]

d. The landfill gas collection system shall satisfy the following requirements, as specified in 40 CFR 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; and

iv. the system shall be designed to minimize off site migration of subsurface gas.

[Authority for term: 40 CFR 60.752(b)(2)(ii)(A) and 40 CFR 60.753(a)]

e. The permittee shall install and place each well or design component as specified in the approved design plan. Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of five years or more, if active; or two years or more, if closed or at final grade.

[Authority for term: 40 CFR 60.755(b)]

f. An open flare shall satisfy the following requirements:

i. The flare shall be designed for and operated with no visible emissions, as determined by Method 22 of Appendix A of 40 CFR Part 60, 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 when landfill gases are vented to it. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. The net heating value of the gas being combusted and the actual exit velocity shall be calculated as required in the Testing Section of this permit.

iii. Flares shall be steam-assisted, air-assisted, or non-assisted, and shall comply with the following requirements for the heat content in paragraph iii.(a) and the maximum tip velocity in paragraph iii.(b), or shall comply with the alternative requirements in paragraph iii.(c) for nonassisted flares:

(a) Steam assisted or air assisted flares shall have a net heating value of 300 Btu/scf (11.2 MJ/scm) or greater, for the gas being combusted.

Nonassisted flares shall have a net heating value of 200 Btu/scf (7.45 MJ/scm) for the gas being combusted.

The net heating value of the gas being combusted shall be calculated as required in the Testing Section of this permit.

(b) Steam assisted and/or nonassisted flares shall be designed for and operated with an exit velocity of less than 18.3 m/sec (60 ft/sec), with the following exceptions:

(i) steam assisted and nonassisted flares, having a net heating value of 1,000 Btu/scf (37.3 MJ/scm) for the gas being combusted, can be designed for and operated with an exit velocity equal to or greater than 18.3 m/sec (60 ft/sec), but less than 122 m/sec (400 ft/sec); and

(ii) steam assisted and nonassisted flares can be designed for and operated with an exit velocity of less than the velocity calculated below for $V_{max,}$ and less than 122 m/sec (400 ft/sec):

Log_{10} (V_{max}) = (HT + 28.8)/31.7

where:

V_{max} = maximum permitted velocity, m/sec;

28.8 = constant;

31.7 = constant; and

HT = the net heating value as determined in the Testing Section of this permit.

Air-assisted flares shall be designed and operated with an exit velocity less than the velocity V_{max}, calculated as follows:

V_{max} = 8.706 + 0.7084 (HT)

where:

V_{max} = maximum permitted velocity, m/sec;

8.706 = constant;

0.7084 = constant; and

HT = the net heating value as determined in the Testing Section of this permit.

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

$V_{max} = (X_{H2}\ K_1)\ K_2$

where:

V_{max} = maximum permitted velocity, m/sec;

K_1 = constant, 6.0 volume percent hydrogen;

K_2 = constant, 3.9 (m/sec)/volume percent hydrogen; and

X_{H2} = the volume percent of hydrogen, on a wet basis, as calculated by using the ASTM Method D1946 90.

[Authority for term: 40 CFR 60.18 and OAC rule 3745-21-10(P)]

g. The permittee shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

i. 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

ii. device that records flow to or bypass of the flare. The permittee shall either:

(a) install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or

(b) secure the bypass line valve in the closed position with a car seal or a lock and key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

[Authority for term: 40 CFR 60.756(c)]

h. The collection and control system may be capped or removed provided that all of the following conditions, as specified in 40 CFR 60.752(b)(2)(v), are met:

i. The landfill shall no longer be accepting solid waste and shall be permanently closed as defined in 40 CFR 60.751 and in accordance with the requirements of 40 CFR 258.60.

ii. The collection and control system shall have been in operation a minimum of 15 years.

iii. The NMOC emission rate of the landfill, calculated per 40 CFR 60.754(b), shall be less than 50 megagrams/year on three successive test dates. The test dates shall be no less than 90 days and no more than 180 days apart.

iv. A closure report shall be submitted to the Director within 30 days of waste acceptance cessation and no additional wastes shall be placed in the landfill.

[Authority for term: 40 CFR 60.752(b)(2)(v)]

i. The permittee shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the Director:

i. The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandibility, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control,

corrosion resistance, fill settlement, and resistance to the refuse decomposition heat.

ii. The sufficient density of gas collection devices, determined above, shall address landfill gas migration issues and augmentation of the collection system through the use of active systems at the landfill perimeter or exterior.

[Authority for term: 40 CFR 60.759(a)(1) and (2)]

j. The permittee shall convey the landfill gas to a control system through the collection header pipe(s). The gas moving equipment shall be sized to handle the maximum gas generation flow rate expected over its intended period of use, using the following procedures:

i. For existing collecting systems, the actual flow data shall be used to project the maximum flow rate.

ii. For new collection systems, the maximum flow rate shall be calculated in accordance with 40 CFR 60.755(a)(1), using the formula also contained in the Testing Section of this permit.

[Authority for term: 40 CFR 60.755(a)(1), in part]

k. Landfill gas collection devices shall be placed to control all gas producing areas except those that meet the following requirements:

i. Any segregated area of non degradable material may be excluded from the gas collection requirements if up-to-date plot maps showing each uniquely identified existing and planned collector in the system, their locations on the map, and the type of waste deposited in each area has been documented. The documentation shall provide the nature, date of deposition, location, and amount of non degradable material deposited in the area, and shall be provided to the Director upon request.

ii. Any non productive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1% of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the Director upon request. A separate NMOC emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill.

Emissions from each section shall be computed using the following equation:

$$Q_i = 2k\, L_0\, M_i\, (e^{-kti})\, C_{NMOC}\, (3.6\times10^{-9})$$

where:

Q_i = NMOC emission rate from the ith section, in megagrams per year

k = methane generation rate constant, in year 1

L_O = methane generation potential, in cubic meters per megagram solid waste

M_i = mass of the degradable solid waste in the ith section, in megagram

t_i = age of the solid waste in the ith section, in years

C_{NMOC} = concentration of nonmethane organic compounds, in parts per million by volume

$3.6x10^{-9}$ = conversion factor

iii. The values for k, L_O, and C_{NMOC} determined in field testing shall be used, if field testing has been performed in determining the NMOC emission rate or the radii of influence. If field testing has not been performed, the default values for k, L_O and C_{NMOC} are as follows:

k** = 0.05 per year

L_O = 170 cubic meters per megagram

C_{NMOC} = 4,000 parts per million by volume as hexane

** For landfills located in geographical areas with a thirty year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year.

[Authority for term: 40 CFR 60.759(a)(3)]

l. When the permittee constructs new gas collection devices, the permittee shall use the following equipment or procedures:

i. The landfill gas extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration.

ii. Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow

indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.

iii. Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

[Authority for term: 40 CFR 60.759(b)]

m. The provisions of this permit, under the authority of 40 CFR, Part 60, Subpart WWW, apply at all times, except during periods of start up, shutdown, or malfunction, provided that the duration of the start up, shutdown, or malfunction event does not exceed 5 days for collection systems and does not exceed 1 hour for treatment or control devices, in which case any deviation from the requirements shall be recorded and included in the semiannual report.

[Authority for term: 40 CFR 60.755(e)]

n. The permittee shall develop and implement a written startup, shutdown, and malfunction (SSM) plan according to the provisions in 40 CFR 63.6(e)(3). A copy of the SSM plan must be maintained on site.

[Authority for term: 40 CFR 63.1960]

o. 40 CFR Part 63, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to emissions units affected by 40 CFR Part 63.

p. 40 CFR Part 63, National Emissions Standards for Hazardous Air Pollutants:

i. 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 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.

ii. 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.

iii. This MSW landfill is an existing affected source. The facility is an existing source for Subpart AAAA because this MSW landfill has not commenced construction or reconstruction after November 7, 2000. The facility is an affected source for Subpart AAAA as defined in 40 CFR 63.1935(a)(3) because the facility has a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters and has estimated uncontrolled emissions equal to or greater than 50 megagrams per year NMOC as calculated according to Section 60.754(a) of Subpart WWW of the New Sorce Performance Standards,

iv. The permittee shall comply with this subpart by January 16, 2004. The permittee is no longer required to comply with this subpart when controls are no longer required by 40 CFR 60.752(b)(2)(v) of Subpart WWW.

v. As specified in Subpart AAAA, 40 CFR 63.1955, this MSW landfill is subject to the requirements of 40 CFR Part 60, Subpart WWW, the Subpart AAAA requirements in 40 CFR 63.1960 through 63.1985, and the following sections of 40 CFR Part 63 Subpart A, the General Provisions of the National Emissions Standards for Hazardous Air Pollutants for Source Categories (NESHAPS):

63.1(a), 63.1(b), 63.1(e), 63.2, 63.4, 63.5(b), 63.6(e), 63.6(f), 63.10(b)(2)(i) through 63.10(b)(2)(v), 63.10(d)(5), 63.12(a), and 63.15.

vi. 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, the permittee 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 40 CFR Part 63 as specified in Table 1 of Subpart AAAA 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.

vii. General and Continuing Compliance Requirements

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, the permittee has failed to meet the control device operating conditions described in Subpart AAAA and has deviated from the requirements of Subpart AAAA. Finally, the permittee 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 Subpart AAAA.

viii. Deviations

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

(b) Deviation means any instance in which an affected source subject to Subpart AAAA, or an owner or operator of such a source:

(i) fails to meet any requirement or obligation established by Subpart AAAA, including, but not limited to, any emissions limitation (including any operating limit) or work practice standard;

(ii) 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

(iii) fails to meet any emission limitation (including any operating limit), or work practice standard in Subpart AAAA during SSM, regardless of whether or not such failure is permitted by Subpart AAAA.

(c) For the purposes of the landfill monitoring and SSM plan requirements, a deviation occurs when the control device operating parameter boundaries described in 40 CFR 60.758(c)(1) of Subpart WWW are exceeded, or, when an SSM plan is not developed, implemented, or maintained on site.

The permittee 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 Subpart AAAA.

q. The provisions of subpart WWW apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.

r. Testing shall be conducted in accordance with the provisions of 40 CFR Part 60, Subpart A, Section 60.8 and 40 CFR Part 60, Subpart AAAA, Section 60.1300.

s. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart WWW.

t. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

u. The landfill areas and operations that are covered by this permit and subject to the requirements for fugitive particulate emissions are listed below:

all landfill areas where solid wastes are deposited;

overburden removal;

construction of cells;

construction of haul roads;

MSW dumping, transfer, compaction and covering;

bulldozing operations;

wind erosion; and

closure of cells.

v. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(B)(1).

w. The permittee shall employ best available control measures on all landfill operations associated with the landfill cell for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the cell load-in operations (i.e., MSW dumping, transfer, compaction and covering) with water and/or any other suitable dust suppression chemicals at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

x. The above-mentioned control measures shall be employed for each cell load-in operation of the 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.

y. The permittee shall employ best available control measures on all surface working operations associated with the landfill cell for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the surface working operations (i.e., overburden removal, construction of cells, construction of haul roads, bulldozing operations, and closure of cells) with water and/or other suitable dust suppression chemicals at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

z. The permittee shall employ best available control measures for wind erosion from surfaces associated with the landfill cell for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the

permittee's permit application, the permittee has committed to treat the landfill surface with water and/or other suitable dust suppression chemicals at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

aa. The above-mentioned control measures shall be employed for surface operations and wind erosion from the landfill cell if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measure(s) 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.

bb. Implementation of the above-mentioned control measures, b)(2)t. through b)(2)z., in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.

c) Operational Restrictions

(1) 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, and as required in 40 CFR 60.752, 60.753, and this permit. The collection and control system shall meet the specifications for an active collection system as required in 40 CFR 60.759, included in this permit.

[Authority for term: 40 CFR 60.753(a)]

(2) 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 all instances when positive pressure occurs in efforts to avoid a fire);

b. use of a geomembrane or synthetic cover (the permittee shall develop acceptable pressure limits in the design plan); or

c. 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 Ohio EPA.

[Authority for term: 40 CFR 60.753(b)]

(3) 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 level, or oxygen level at a particular well, if it can be demonstrated with supporting data, that the elevated parameter could not cause fires or significantly inhibit anaerobic decomposition by killing methanogens. The nitrogen or oxygen concentration shall be determined as required in the Testing Section of this permit.

[Authority for term: 40 CFR 60.753(c)]

(4) 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. To determine if this level is exceeded, the permittee shall conduct surface testing on a quarterly basis around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual 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.

The permittee shall install a new well or other collection device for any location where the monitored methane concentration equals or exceeds 500 ppm above background three times within a quarterly period and within 120 calendar days of the initial exceedance.

[Authority for term: 40 CFR 60.753(d)] and [40 CFR 60.755(c)(4)(v)]

(5) The permittee shall operate the collection system such that all collected gases are vented to a control system designed and operated in compliance with the requirements in this permit. 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 1 hour.

[Authority for term: 40 CFR 60.753(e)]

(6) The permittee shall operate the control (flare) and/or treatment system (prior to export of the landfill gas) at all times when the collected gas is routed to the respective system.

[Authority for term: 40 CFR 60.753(f)]

(7) If monitoring demonstrates that the operational requirements for negative pressure, interior wellhead temperature, wellhead oxygen or nitrogen concentration, and/or surface methane levels are not met, corrective action shall be taken as specified in the monitoring and record keeping requirements for the pressure, temperature, oxygen or nitrogen concentration at each well's gas collection header and surface methane measurements. If corrective actions are taken as specified in 40 CFR 60.755, the monitored exceedance is not a violation of the operational requirements.

[Authority for term: 40 CFR 60.753(g)]

(8) The permittee shall operate the flare within the parameter ranges established during the initial or most recent performance test. The parameters established shall be based on the control device installed and may include a heat sensing device, gas flow rate measuring device, and/or gauge pressure device in the gas collection header.

[Authority for term: 40 CFR 60.752(b)(2)(iii)(B)(2)]

(9) The permittee shall not accept or dispose of any "asbestos material" as defined in OAC rule 3745-20-01, or asbestos-containing waste material as defined in 40 CFR 61.141, containing more than 1 percent asbestos as determined using the methods specified in Appendix A, Subpart F, 40 CFR Part 763, section 1, Polarized Light Microscopy. The receipt or disposal of any asbestos or asbestos-containing waste without proper approval of the Ohio EPA is a violation of the NESHAPS for asbestos and the Ohio EPA Permit to Install rules.

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

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall keep for at least 5 years, up to date, readily accessible, on site records of the design capacity report which showed the landfill capacity to equal or exceed 2.5 million megagrams and/or 2.5 million cubic meters, 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.

[Authority for term: 40 CFR 60.758(a)]

(2) The permittee shall monitor the flare to ensure that it is operated and maintained in conformance with its design and the requirements contained in this permit and as required by 40 CFR 60.18 and OAC rule 3745-21-10(P).

[Authority for term: 40 CFR 60.18 and OAC rule 3745-21-10(P)]

(3) The permittee shall maintain up-to-date, readily accessible, continuous records of any loss of flame to the open flare or flare pilot and/or any incident(s) where the flare is bypassed, using one of the following monitoring systems installed for this purpose:

a. the heat sensing device at the pilot light or flame shall indicate the continuous presence of a flame and maintain a record of the total time of any loss of flame.

b. the gas flow rate measuring device shall record the flow to the flare at least every 15 minutes and shall document the total time of any bypass to the open flare.

c. the bypass line valve shall be locked-out in the closed position and a monthly visual inspection shall document that it is always closed. A record of the total time of any bypass, where the lock-out is removed, shall be maintained along with the records of the monthly inspections of the lock-out device.

[Authority for term: 40 CFR 60.758(c)(2) and (4)]

(4) During any periods of time in which collected gas is routed to the treatment system (prior to export of the landfill gas), the permittee shall monitor and record the operating parameters which indicate proper performance of the treatment system in compliance with the requirements of 40 CFR 60.756(d).

[Authority for term: 40 CFR 60.756(d)]

(5) At all times when the flare is bypassed and collected gas is routed to the treatment system (prior to export of the landfill gas), a record of the total time of the bypass shall be maintained along with the records of (3)c.

[Authority for term: 40 CFR 60.758(c)(2) and 40 CFR 60.756(d)]

(6) When demonstrating compliance with the landfill gas collection and control requirements through use of an open flare, the permittee shall keep up to date, readily accessible records for the life of the control equipment of the data listed below, as measured during the initial performance test or compliance determination:

a. the flare type (i.e., steam assisted, air assisted, or nonassisted);

b. all visible emissions readings;

c. heat content determinations;

d. flow rate or bypass flow rate measurements;

e. exit velocity determinations made during the performance test as specified in 40 CFR 60.18;

f. continuous records of the flare pilot flame or flare flame monitoring; and

g. records of all periods of operations during which the pilot flame of the flare flame is absent.

Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.

[Authority for term: 40 CFR 60.758(b)(4)]

(7) The permittee shall keep up to date, readily accessible records for the life of the control equipment of the data listed below, as measured during the initial performance test or compliance determination:

a. the maximum expected gas generation flow rate, as calculated in 40 CFR 60.755(a)(1) and as required in this permit; and

b. the density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 60.759(a)(1) and this permit.

Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.

[Authority for term: 40 CFR 60.758(b)(1)]

(8) The permittee of a controlled landfill subject to the provisions of this subpart shall keep for 5 years, up to date, readily accessible continuous records of the control equipment operating parameters specified to be monitored in 40 CFR 60.756, as well as, up to date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

[Authority for term: 40 CFR 60.758(c)]

(9) The permittee shall keep 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.

[Authority for term: 40 CFR 60.758(d)]

(10) The permittee shall keep up to date, readily accessible records of the installation date and location of all newly installed collectors as specified under 40 CFR 60.755(b) and as required in this permit.

[Authority for term: 40 CFR 60.758(d)(1)]

(11) The permittee shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing and/or nondegradable wastes, excluded from collection as provided in 40 CFR 60.759(a)(3)(i), as well as any nonproductive areas excluded from collection as provided in 40 CFR 60.759(a)(3)(ii).

[Authority for term: 40 CFR 60.758(d)(2)]

(12) The permittee shall keep for at least 5 years up to date, readily accessible records of all collection and control system (flare) exceedances of the operational standards contained in 40 CFR 60.753 and this permit, the reading in the subsequent month, whether or not the second reading is an exceedance, and the location of each exceedance.

[Authority for term: 40 CFR 60.758(e)]

(13) For the active gas collection system, the permittee shall install a sampling port and a thermometer, or other temperature measuring device, or an access port for temperature measurements at each wellhead and record the following information on a monthly basis:

a. the gauge pressure in the gas collection header at each individual well, in pounds per square inch;

b. the nitrogen or oxygen concentration in the landfill gas, in percent; and

c. the temperature of the landfill gas, in degrees Celsius.

If a well exceeds one of the operating parameters as specified in this permit, except as provided under 40 CFR 60.753(b) and (c)***, action shall be initiated to correct the exceedances within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative time line for correcting the exceedance may be submitted to the Toledo Division of Environmental Services for approval.

*** 40 CFR 60.753(b) allows a positive pressure under three exceptions: in the case of a fire or increased well temperatures; with the use of a geomembrane or synthetic cover; and on a decommissioned well. 40 CFR 60.753(c) allows a higher operating value with a demonstration, including supporting data, that the elevated parameters of temperature

and nitrogen or oxygen concentrations could not support a fire or significantly inhibit anaerobic decomposition by killing methanogens.

[Authority for term: 40 CFR 60.756(a)]

(14) The permittee shall monitor surface concentrations of methane on a quarterly basis according to the instrument specifications and procedures provided below. Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may revert to annual monitoring; however, during the annual monitoring, any methane reading of 500 ppm or more above background detected, returns the frequency for that landfill back to quarterly monitoring. The permittee shall monitor surface concentrations of methane on a quarterly basis as follows:

a. surface concentrations of methane shall be monitored, in ppm, along the entire perimeter of the collection area and along a pattern spaced 30 meters apart (or a site specific established spacing) and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover for each collection area;

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 Section 8.3.1 of Method 21 of Appendix A of 40 CFR Part 60, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions; and

d. any reading of 500 ppm 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 Section A.II:

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. No further monitoring of that location is required until the new well(s) or collection device has been installed.

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 ppm 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.

v. For any location where the monitored methane concentration equals or exceeds 500 ppm above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance.

vi. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding time line for installation may be submitted to the Ohio EPA for approval.

e. The monitor used shall meet the requirements of 40 CFR 60.755(c).

[Authority for term: 40 CFR 60.755(c) and 40 CFR 60.756(f)]

(15) The permittee shall implement a program to monitor for the integrity of the cover on a monthly basis and implement cover repairs as necessary.

[Authority for term: 40 CFR 60.755(c)(5)]

(16) For the purpose of demonstrating whether the gas collection system flow rate meets the requirements for a sufficient extraction rate, the permittee shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under 40 CFR 60.753(b). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Director for approval. The permittee is not required to expand the system a during the first 180 days after gas collection system startup.

[Authority for term: 40 CFR 60.755(a)(3) and (4)]

(17) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the permittee shall monitor each well monthly for temperature and nitrogen or oxygen as provided in 40 CFR 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Director for approval.

[Authority for term: 40 CFR 60.755(a)(5)]

(18) Except as otherwise provided in this section, the permittee shall perform daily inspections of the following landfill areas and operations:

all landfill areas where solid wastes are deposited

overburden removal

construction of cells and haul roads

MSW dumping, transfer, compaction and covering

bulldozing operations

wind erosion

closure of cells

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

(19) The purpose of the inspections is to determine the need for implementing the above-mentioned control measures for fugitive landfill particulate emissions. 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.

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

(20) The permittee may, upon receipt of written approval from the Toledo Division of Environmental Services (TDOES), 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 the Title V permit modification requirements in paragraphs (C)(1) and (C)(3) of OAC rule 3745-77-08.

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

(21) The permittee shall maintain records of the following information:

a. the date and reason 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 d)(21)d. shall be kept separately for each landfill area and operation and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

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

e) Reporting Requirements

(1) The permittee shall submit semiannual reports to the Director, for the landfill collection and control system, which includes the following recorded information:

a. value and length of time for each exceedance of the applicable parameters monitored under 40 CFR 60.756, at each wellhead and as required for the control equipment, which would include:

i. a positive pressure was not corrected within 5 calendar days, when not meeting the three exceptions in 40 CFR 60.753(b) (fire hazard, synthetic cover, or a decommissioned well);

ii. the temperature and oxygen or nitrogen exceeded the applicable limits and was not corrected within 5 calendar days;

iii. any loss of flame to the flare, as detected by the heat sensing device;

b. description and duration of all periods when the gas stream is diverted from the control device (flare) through a bypass line (including when exporting landfill gases offsite) or any indication of periods of bypass of all control devices (flare and offsite landfill gas powered combustion turbine);

c. description and duration of all periods when the control devices were not operating for a period exceeding 1 hour and length of time the control devices were not operating;

d. all periods when the collection system was not operating in excess of 5 days;

e. the location of each exceedance of the 500 ppm methane surface concentration, over the background level, and the concentration recorded at each location for which an exceedance was recorded in the previous month; and

f. the date of installation and the location of each well or collection system expansion added.

This annual report required by 40 CFR 60.757(f) shall be submitted every six months, as required per 40 CFR 63.1980(a), including information on all deviations that occurred during the 6-month reporting period. Deviations for continuous emission monitors or numerical continuous parameter monitors shall be determined using a 3-hour monitoring block average. These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous six calendar months.

[Authority for term: 40 CFR 63.1955(c) and 63.1980(a), 40 CFR 60.757(f)]

(2) Pursuant to the New Source Performance Standards (NSPS), the source owner/operator is hereby advised of the requirements to report the following at the appropriate times:

a. construction date (no later than 30 days after such date);

b. actual start up date (within 15 days after such date); and

c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency

DAPC Permit Management Unit

Lazarus Government Center

P.O. Box 1049

Columbus, OH 43216 1049

and

Toledo Division of Environmental Services

348 S. Erie St.

Toledo, OH 43604

[Authority for term: 40 CFR 60.7]

(3) The permittee, in seeking to comply with 40 CFR 60.752(b)(2)(iii) or the control requirements of this subpart, shall include the following information with the initial performance test report required under 40 CFR 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 rates 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.

[Authority for term: 40 CFR 60.757(g)]

(4) The permittee shall submit a closure report to the Director (Toledo Division of Environmental Services), within 30 days of waste acceptance cessation. Permanent closure shall be conducted in accordance with the requirements of 40 CFR 258.60; and the Ohio EPA may request additional information, as may be necessary, to verify that all of these conditions are met. 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 60.7(a)(4).

[Authority for term: 40 CFR 60.757(d)]

(5) The permittee shall submit an equipment removal report to the Director (Toledo Division of Environmental Services), 30 days prior to removal or cessation of operation of the control equipment. The Ohio EPA may request additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 60.752(b)(2)(v) have been met. The equipment removal report shall contain the following information, as specified in 40 CFR 60.757(e)(1):

a. a copy of the closure report;

b. a copy of the initial performance test report demonstrating that the 15-year minimum control period has expired; and

c. dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year.

[Authority for term: 40 CFR 60.757(e)]

(6) The permittee shall submit quarterly deviation reports that identify any of the following occurrences:

a. each day during which an inspection required by d)(18) was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation;

b. each instance when a control measure required by b)(2)w., b)(2)y. or b)(2)z. that was to be implemented as a result of an inspection, was not implemented;

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

(7) The permittee shall submit semi-annual reports for all sources affected by the provisions of the SSM requirements specified in Table 1 of 40 CFR Part 63, Subpart AAAA. These reports shall be submitted to the Toledo Division of Environmental Services by March 30 and September 30 and shall cover the previous six-month period, July 1-Decemer 31 and January 1-June 30, respectively.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

no visible emissions from the flare, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR Part 60. Alternate, equivalent methods may be used upon approval by the TDOES.

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

b. Emission Limitation:

visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60 using the methods and procedures specified in OAC rule 3745-17-03(B)(3). Alternate, equivalent methods may be used upon approval by the TDOES.

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

c. Emission Limitation:

43.2 pounds per hour of CO

Applicable Compliance Method:

The emission limitation represents the potential to emit calculated using AP-42 Section 2.4-1 (dated 11/98), an emission factor for CO of 12,000 kg CO/10^6 dscm methane, a maximum methane flow rate of 1.93×10^7 m^3/yr, a conversion of 0.4536 kg/pound, and 8760 hrs/yr. Since the emission limitation represents the emission unit's potential to emit, no record keeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with the above limitation.

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

d. Emission Limitation:

3.4 pounds per hour of NO_x

Applicable Compliance Method:

The emission limitation represents the potential to emit calculated using AP-42 Section 2.4-1 (dated 11/98), an emission factor for NO_x of 270 kg $NO_x/10^6$ dscm methane, a maximum methane flow rate of $1.93x10^7$ m^3/yr, a conversion of 0.4536 kg/pound, and 8760 hrs/yr. Since the emission limitation represents the emission units' potential to emit, no record keeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with the above limitation.

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

e. Emission Limitations:

0.3 pound per hour of NMOC

47.3 pounds per hour of methane

Applicable Compliance Method:

The emission limitations were developed by applying a 98% reduction efficiency for control with a flare to a maximum calculated flare gas stream of 13.8 lbs of NMOC/hr and 2,360 lbs of methane/hr. AP-42 Section 2.4.4 (dated 11/98) emission factors were used to calculate the total uncontrolled methane and NMOCs. A destruction efficiency of 98% was used to calculate the amount of methane and NMOCs destroyed. The remainder (207 tons per year of methane and 1.2 tons per year of NMOCs) are emitted over 8760 hrs/yr. Compliance shall be demonstrated by ensuring the flare operates at the proper efficiency through the flare monitoring and record keeping requirements specified in d).

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

f. Emission Limitation:

0.97 pound per hour of particulate emissions

Applicable Compliance Method:

The emission limitation represents the potential to emit calculated using AP-42 Section 2.4-1 (dated 11/98), an emission factor for PE of 270 kg $PE/10^6$ dscm methane, a maximum methane flow rate of $1.93x10^7$ m^3/yr, a conversion of 0.4536 kg/pound, and 8760 hrs/yr. Since the emission limitation represents the emission units' potential to emit, no recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with the above limitation.

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

g. Emission Limitation:

0.8 pound per hour of SO_2

Applicable Compliance Method:

The emission limitation represents the potential to emit calculated assuming that all sulfur containing compounds in landfill gas react to form SO_2. The potential to emit calculations were based on a sulfur compound concentration of 46.9 ppm from AP-42 Section 2.4-1 (dated 11/98), a maximum gas flow rate to the flare of $1.93x10^7$ m^3/yr, a conversion of 0.4536 kg/pound, and 8760 hrs/yr. Since the emission limitation represents the emission units' potential to emit, no record keeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with the above limitation.

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

h. Emission Limitation:

0.01 pound per hour of HCl

Applicable Compliance Method:

The emission limitation represents the potential to emit calculated assuming that all chlorine containing compounds collected in landfill gas react to form HCl during combustion in the flare. The potential to emit calculations were based on a chlorine compound concentration of 42.0 ppm from AP-42 Section 2.4-1 (dated 11/98), a maximum chlorine compound flow rate to the flare of $1.46x10^3$ m^3/yr, a conversion of 0.4536 kg/lb, and 8760 hrs/yr. Since the emission limitation represents the emission units' potential to emit, no record keeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with the above limitation.

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

i. Emission Limitation:

0.01 pound per hour of Cl_2

Applicable Compliance Method:

The emission limitation represents the potential to emit calculated assuming that all chlorine containing compounds collected in landfill gas react to form HCl during combustion in the flare. AP-42 provides an average capture efficiency of 75% and an estimated control efficiency of 98% for the flare in Section 2.4 (dated 11/98). f)(2) estimates the uncontrolled Cl_2 emissions to be 2.3 tons per year and the fugitive to be (1-.75) or 0.6 tons per year of Cl_2. The difference (2.3-0.6 tons per year) is the amount of Cl2 that goes to the flare where 98% is combusted to HCl and the remaining 2% or 0.3 tons per year passes through the flare. Conversion of 0.3 tons per year Cl_2 to pound per hour of Cl_2 utilizes conversion factors of 8760 hrs/yr and 2000 lbs/ton. Since the emission limitation represents the emission units' potential to emit, no record keeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with the above limitation.

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

j. Emission Limitations:

1.2 tons per year of NMOC

207 tons per year of methane

4.25 tons per year of particulate emissions

3.53 tons per year of SO_2

14.7 tons per year of NO_x

189.1 tons per year of CO

0.036 ton per year of HCl

0.03 ton per year of Cl_2

Applicable Compliance Method:

The tons per year limitations were developed by multiplying the pound per hour limitations by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitations, compliance will also be shown with the annual limitations.

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

k. Emission Limitation:

1.93 tons per year of PE

11.9 tons per year of particulate emissions as PM10

Applicable Compliance Method:

Emission limitations were developed as follows:

i. applying a 70% control efficiency for dust suppression to a maximum potential uncontrolled emission rate of 12.35 tons per year of particulate emissions as PM10 for unpaved gravel roadways during construction, based on AP-42, section 13.2.2 (dated 9/98) emission factors;

ii. a maximum potential uncontrolled emission rate of 0.03 tons per year of particulate emissions for material handling operations, based on AP-42, section 13.2.4 (dated 1/95) emission factors;

iii. a maximum potential uncontrolled emission rate of 1.9 tons per year of particulate emissions for wind erosion from exposed areas, based on AP-42, table 11.9-4 (dated 7/98) emission factors; and

iv. a maximum potential uncontrolled emission rate of 8.2 tons per year of particulate emissions as PM10 for bulldozing operations, based on AP-42, table 11.9-1 (dated 7/98) emission factors.

The particulate emissions and particulate emissions as PM10 limits are the sums of the above-mentioned emissions.

Compliance shall be demonstrated through the fugitive dust monitoring and record keeping requirements in d).

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

l. Emission Limitations

Fugitive Emissions from Landfill gas

20.0 tons per year NMOC

3,446 tons per year methane

7.8 tons per year VOC

0.6 ton per year Cl_2

Applicable Compliance Method

The annual emission limitations represent the maximum potential to emit based on AP-42 emission factors for landfill gas generation Section 22.4 (dated 11/98). Maximum potential emissions will occur in the year 2021 and are based on the following:

i. maximum daily landfill waste acceptance of 1,500 tons/day

ii. maximum landfill capacity of 10,073,000 tons compacted waste (9.157×10^6 Mg)

iii. NMOC concentration data obtained from AP-42 Section 2.4 (dated 11/98) value of 595 ppm

iv. an assumed landfill gas collection system efficiency of 75% based on AP-42, section 2.4 (dated 11-/98) factors.

Since the annual limitations represent the emissions units' maximum potential to emit, no recordkeeping, deviation reporting or compliance method calculations are required to demonstrate compliance with the above limitations.

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

(2) The nitrogen or oxygen concentration shall be monitored at each landfill gas collection well as required in this permit and shall be determined as follows:

a. The nitrogen level shall be determined using Method 3C from 40 CFR Part 60, Appendix A, unless an alternative test method is approved by the Director.

b. The oxygen level shall be determined by an oxygen meter using Method 3A or 3C from 40 CFR Part 60, Appendix A, unless an alternative test method is approved by the Director, except that:

i. the span shall be set so that the regulatory limit is between 20 and 50 percent of the 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; and

v. the allowable sample bias, zero drift, and calibration drift are plus or minus 10 percent.

[Authority for term: 40 CFR 60.753(c)]

(3) After the installation of a collection and control system in compliance with 40 CFR 60.755, the permittee shall calculate the NMOC emission rate for purposes of determining when the system can be removed, as provided in 40 CFR 60.752(b)(2)(v), using the following procedures to calculate the mass emission rate of NMOC and by applying the testing results in the following equation:

$M_{NMOC} = 0.00189\ (Q_{LFG})\ C_{NMOC}$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year

Q_{LFG} = flow rate of landfill gas, cubic meters per minute

C_{NMOC} = NMOC concentration, parts per million by volume as hexane

a. The flow rate of landfill gas, QLFG, shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of Appendix A of 40 CFR Part 60.

b. The average NMOC concentration, CNMOC, shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 from 40 CFR Part 60, Appendix A. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (APB42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The landfill owner or operator shall divide the NMOC concentration from Method 25C by six to convert from CNMOC as carbon to CNMOC as hexane.

c. The permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Administrator of the U.S. Environmental Protection Agency.

[Authority for term: 40 CFR 60.754(b)]

(4) The permittee shall maintain the following instrumentation specifications and procedures in order to demonstrate compliance with surface methane monitoring:

a. The portable analyzer for surface methane shall meet the instrument specifications provided in section 3 of Method 21 of Appendix A of 40 CFR Part 60, except that "methane" shall replace all references to VOC.

b. The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.

c. To meet the performance evaluation requirements in section 3.1.3 of Method 21 of Appendix A of 40 CFR Part 60, the instrument evaluation procedures of section 4.4 of Method 21 of Appendix A of 40 CFR Part 60 shall be used.

d. The calibration procedures provided in section 4.2 of Method 21 of Appendix A of 40 CFR Part 60 shall be followed immediately before commencing a surface monitoring survey.

[Authority for term: 40 CFR 60.755(d)]

(5) The permittee shall maintain the following information for the life of the control equipment (recovery and treatment system and/or flare) as measured during the initial performance test or compliance demonstration:

a. the maximum expected gas generation flow rate, in cubic meters/year as calculated based on the following:

i. For sites with unknown year to year solid waste acceptance rate:

$Q_m = 2 L_o R (e^{-kc} - e^{-kt})$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year

L_o = methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagram per year

k = methane generation rate constant, per year

t = age of the landfill at equipment installation plus the time the owner or operator 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), years

c = time since closure, years (for an active landfill c = 0 and $e^{-kc} = 1$)

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

$Q_m = \sum 2 k L_o M_i e^{-kti}$ for i = 1 through i = n

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year

k = methane generation rate constant, per year

L_o = methane generation potential, cubic meters per megagram solid waste

M_i = mass of solid waste in the ith section, in megagrams

ti = 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 above. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using either of the equations above 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. For the purposes of determining sufficient density of gas collectors for compliance with a collection system designed to handle the maximum expected landfill gas flow rate, the permittee shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Director, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

[Authority for term: 40 CFR 60.755(a)(1) and (2)]

(6) The net heating value of the landfill gas being combusted at the flare shall be calculated as follows:

$HT = k \sum C_i H_i$ for i = 1 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 Celsius and 760 mm Hg, but the standard temperature of 20 degrees Celsius is used for determining the volume corresponding to one mole;

k = constant, 1.740×10^7 (l/ppm) (gmole/scm) (MJ/kcal), where the standard temperature for gmole/scm is 20 degrees Celsius;

C_i = 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 90; and

H_i = net heat of combustion of sample component i, kcal/g mole at 25 degrees Celsius and 760 mm Hg. The heats of combustion may be determined using ASTM D4809 95 (incorporated by reference as specified in 40 CFR 60.17) if published values are not available or cannot be calculated.

The conversion factor of 26.84 Btu-scm/MJ-scf can be used to convert the net heating value of the gas (HT) from MJ/scm to Btu/scf.

[Authority for term: 40 CFR 60.18 and OAC rule 3745-21-10(P)(2)]

(7) The actual exit velocity of the flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure) of the flare header or headers that feed the flare, as determined by Reference Methods 2, 2A, 2C, or 2D, as appropriate, by the unobstructed (free) cross sectional area of the flare tip.

The conversion factor of 3.281 ft/m can be used to convert the velocity from m/sec to ft/sec.

[Authority for term: 40 CFR 60.18 and OAC rule 3745-21-10]

g) Miscellaneous Requirements

(1) None.

3. F003, Storage Piles

Operations, Property and/or Equipment Description:

Storage Piles

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 operations(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. 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
all storage pile operations (identified as F002 in PTI 04-01190 and Z003 in the TV application)		
a.	OAC rule 3745-31-05(A)(3) established by PTI 04-01190 as issued 9/29/99 and identified as F002 in that permit	7.4 tons per year of fugitive particulate emissions less than or equal to 10 microns in diameter (PM10)
load-in and load-out of storage piles see b)(2)a. for an identification of the storage piles		
b.	OAC rule 3745-31-05(A)(3) established by PTI 04-01190 as issued 9/29/99 and identified as F002 in that permit	no visible particulate emissions except for one minute in any hour best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust see b)(2)b. and b)(2)c.
c.	OAC rule 3745-17-07(B)(6)	see b)(2)g.
d.	OAC rule 3745-17-08(B)	see b)(2)f.
wind erosion from storage piles see b)(2)a. for an identification of the storage piles		
e.	OAC rule 3745-31-05(A)(3) established by PTI 04-01190 as issued 9/29/99 and identified as F002 in that permit	no visible particulate emissions except for one minute in any hour best available control measures that are

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		sufficient to minimize or eliminate visible emissions of fugitive dust see b)(2)d. and b)(2)e.
f.	OAC rule 3745-17-07(B)(6)	see b)(2)g.
g.	OAC rule 3745-17-08(B), (B)(6)	see b)(2)f.

(2) Additional Terms and Conditions

a. The storage piles that are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08 are listed below:

all overburden storage piles

all clay storage piles

all stone storage piles

b. The permittee shall employ best available control measures on all load-in and load-out operations associated with the storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to maintaining adequate moisture in loads prior to dumping and adding water, if necessary, to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

c. The above-mentioned control measure(s) shall be employed for each load-in and load-out operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary.

d. The permittee shall employ best available control measures for wind erosion from the surfaces of all storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to maintaining adequate moisture in piles and adding water, if necessary, to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

e. The above-mentioned control measure(s) shall be employed for wind erosion from each pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned

applicable requirements. Implementation of the control measure(s) shall not be necessary for a storage pile 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.

f. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.

g. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform daily inspections of each load-in operation at each storage pile.

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

(2) Except as otherwise provided in this section, the permittee shall perform daily inspections of each load-out operation at each storage pile

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

(3) Except as otherwise provided in this section, the permittee shall perform daily inspections of the wind erosion from pile surfaces associated with each storage pile.

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

(4) No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile is covered with snow and/or ice and for any storage pile activity 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.

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

(5) The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for load-in and load-out of a storage pile, and wind erosion from the surface of a storage pile. The inspections shall be performed during representative, normal storage pile operating conditions.

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

(6) The permittee may, upon receipt of written approval from the Toledo Division of Environmental Services (TDOES), 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 the Title V permit modification requirements in paragraphs (C)(1) and (C)(3) of OAC rule 3745-77-08.

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

(7) The permittee shall maintain records of the following information:

a. the date and reason 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;and

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, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure(s).

The information required in d)(7)d. shall be kept separately for (i) the load-in operations, (ii) the load-out operations, and (iii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

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

e) Reporting Requirements

(1) The permittee shall submit deviation reports that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to 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.

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

(2) The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-15-03(B)(1)(a)], [OAC rule 3745-15-03(C)] and [OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

No visible particulate emissions except for a period of time not to exceed one minute in any one hour for any load-in and load-out of storage piles.

No visible particulate emissions except for a period of time not to exceed one minute during any hour for any wind erosion from storage piles.

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources") as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03. Alternate, equivalent methods may be used upon approval by the TDOES.

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

b. Emission Limitation:

7.4 tons per year of particulate emissions as PM10

Applicable Compliance Method:

Compliance with fugitive PE limitations shall be determined by using the emission factor equations in Sections 13.2.4 and 13.2.5, in Compilation of Air Pollutant Emission Factors, AP 42, Fifth Edition, Volume 1 (revised 1/95), for load-in operations, load-out operations, and wind erosion. This emission limitation was developed by applying a 50% control efficiency for dust suppression during load-in and load-out to a maximum potential uncontrolled emission rate of 0.057 tons per year of particulate emissions as PM10 and a 50% control efficiency for dust suppression for wind erosion to a maximum potential uncontrolled emission rate of 14.75 tons per year of particulate emissions as PM10.

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

g) Miscellaneous Requirements

(1) None.