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

2/10/2014

Certified Mail

Facility ID: 0546010137
Permit Number: P0114854
County: Logan

Mr. Nathan Taylor, P.E.
Cherokee Run Landfill
933 Frank Road
Columbus, OH 43223

RE: FINAL AIR POLLUTION CONTROL TITLE V PERMIT
Permit Type: Renewal

Dear Permit Holder:

Enclosed is a finalOhio Environmental Protection Agency (EPA) Air Pollution Title V permit that allows you to operate the facility in the manner indicated in the permit. Because this permit may contain several conditions and restrictions, we urge you to read it carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

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

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

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

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

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Southwest District Office as indicated on page one of your permit.

Sincerely,

Michael W. Ahern

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

Cc: U.S. EPA Region 5 *Via E-Mail Notification*
Ohio EPA DAPC, Southwest District Office

FINAL

Division of Air Pollution Control
Title V Permit
for
Cherokee Run Landfill

Facility ID:	0546010137
Permit Number:	P0114854
Permit Type:	Renewal
Issued:	2/10/2014
Effective:	3/3/2014
Expiration:	3/3/2019

Division of Air Pollution Control
Title V Permit
for
Cherokee Run Landfill

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Authorization

Facility ID:	0546010137
Facility Description:	Municipal solid waste landfill
Application Number(s):	A0047929
Permit Number:	P0114854
Permit Description:	Title V renewal for a municipal solid waste landfill
Permit Type:	Renewal
Issue Date:	2/10/2014
Effective Date:	3/3/2014
Expiration Date:	3/3/2019
Superseded Permit Number:	P0088822

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

Cherokee Run Landfill
2946 US Route 68 North
Bellefontaine, OH 43311-0000

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

Ohio EPA DAPC, Southwest District Office
401 East Fifth Street
Dayton, OH 45402
(937)285-6357

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Interim 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 For State-Only Requirements

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

(5) Standard Term and Condition A. 30.

(Authority for term: ORC 3704.036(A))

2. Monitoring and Related Record Keeping and Reporting Requirements

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

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

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

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

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.

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

b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordingsfor continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

4. Risk Management Plans

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

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

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

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

5. Title IV Provisions

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

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

6. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

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

7. General Requirements

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

b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permitexcept as provided pursuant to A.16 below.

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

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

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

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

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

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

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

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

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

8. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.

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

9. Marketable Permit Programs

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

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

10. Reasonably Anticipated Operating Scenarios

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

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

11. Reopening for Cause

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

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

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

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

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

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

12. Federal and State Enforceability

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

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

13. Compliance Requirements

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

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

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

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

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

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

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

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

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

d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the Ohio EPA DAPC, Southwest District Office) and the Administrator of the U.S. EPA in the following manner and with the following content:

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

(2) Compliance certifications shall include the following:

a. Identification of each term or condition that is the basis of the certification. The identification may include a statement by the Responsible Official that every term and condition that is federally enforceable has been reviewed, and such terms and conditions with which there has been continuous compliance throughout the year are not separately identified.

b. The permittee's current compliance status.

c. Whether compliance was continuous or intermittentconsistent with A.13.d.2.a above.

d. The method(s) used for determining the compliance status of the source currently and over the required reporting period consistent with A.13.d.2.a above.

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

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

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

14. Permit Shield

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

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

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

15. Operational Flexibility

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

after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

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

16. Emergencies

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

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

17. Off-Permit Changes

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

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

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

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

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

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

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

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

18. Compliance Method Requirements

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

(This term is provided for informational purposes only.)

19. Insignificant Activities or Emissions Levels

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

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

20. Permit to Install Requirement

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

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

21. Air Pollution Nuisance

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

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

22. Permanent Shutdown of an Emissions Unit

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

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

Unless otherwise exempted, noemissions unit identified in this permit that has beencertified by the Responsible Official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

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

23. Title VI Provisions

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

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

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

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

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

24. Reporting Requirements Related to Monitoring and Record Keeping RequirementsUnder 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 theOhio EPA DAPC, Southwest District Office.

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

25. Records Retention RequirementsUnder State Law Only

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original

strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

26. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

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

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

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

28. Permit Transfers

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

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

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

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

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

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

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

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

30. Submitting Documents Required by this Permit

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

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 and Parking Areas

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
a.	OAC rule 3745-31-05(A)(3) And PTI 05-14428	Particulate emissions (PE) shall not exceed 75.5 tons per year. Particulate matter with an aerodynamic diameter equal to or less than 10 microns (PM10) shall not exceed 16.7 tons per year. Particulate matter with an aerodynamic diameter equal to or less than 2.5 microns (PM2.5) shall not exceed 6.6 tons per year. There shall be no visible PE from any paved roadway or parking area, except for a period of time not to exceed 1 minute during any 60-minute observation period. There shall be no visible PE from any unpaved roadway or parking area, except for a period of time not to exceed 3 minutes during any 60-minute observation period. Employ best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See sections b)(2)a. thru g., c)(1), d)(1), d)(2), e)(1), f)(1), and f)(2), below
b.	OAC rules 3745-17-07(B) and 3745-17-08(B)	See Section b)(2)h., below.

(2) Additional Terms and Conditions

a. 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. The permittee shall employ water flushing and mechanical sweeping for the paved roadways and parking areas at sufficient frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

b. The permittee shall employ best available control measures on the unpaved shoulders of all paved roadways for the purpose of ensuring compliance with the above-mentioned applicable requirements. The permittee will improve the surface of any unpaved shoulders as necessary to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

c. 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. The permittee shall employ water as well as improve the surface of any unpaved roadway and parking area as necessary to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

d. 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.

e. 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.

f. 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.

g. 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.

h. This emissions unit is not located in an "Appendix A" area as indicated in OAC rule 3745-17-08. Therefore, the emissions unit is not subject to the RACM requirements established in OAC rule 3745-17-08(B) and the visible emission limitations specified in OAC rule 3745-17-07(B).

c) Operational Restrictions

(1) This facility shall employ the Best Available Technology (BAT) for minimizing or eliminating the release of fugitive emissions as outlined in section b)(2) of this permit.

d) Monitoring and/or Recordkeeping Requirements

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

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.

The permittee may, upon receipt of written approval from Ohio EPA, Southwest District Office, 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.

(2) The permittee shall maintain daily 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 above information required in d)(2).d. shall be kept separately for the paved roadways and parking areas, and 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.

e) Reporting Requirements

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

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;

b. any period in which visible emissions were observed in exceedance of the applicable limitations;

c. any additional control steps that were taken to reduce the fugitive dust emissions; and

d. each instance when a required control measures were 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.

[OAC rule 3745-15-03(B)(1)(a)], [OAC rule 3745-15-03(C)], and [OAC rule 3745-77-07(A)(3)(c)]

f) Testing Requirements

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

a. Emission Limitation:

Particulate emissions (PE) shall not exceed 75.5 tons per year.

Particulate matter with an aerodynamic diameter equal or less than 10 microns (PM10) shall not exceed 16.7 tons per year.

Particulate matter with an aerodynamic diameter equal or less than 2.5 microns (PM2.5) shall not exceed 6.6 tons per year.

The above limitations are based on the following equations from AP-42 Chapters 13.2.1 and 13.2.2:

AER = AERp + AERu + AERc

Where:

AER = Annual Emission Rate, in tons of PE per year;

AERp = Annual Emission Rate from paved roads, in tons per year;

AERu = Annual Emission Rate from unpaved roads, in tons per year; and

AERc = Annual Emission Rate from cover /construction, in tons per year.

Paved Roads:

AERp = [(VMT x Ef) x (1-P/4N) x (1-Cf)]/2000

Where:

AERp = Annual Emission Rate paved in tons/yr.;

VMT = Vehicle Miles Traveled, (2.5 mile x 160,875 loads per year = 402188 VMT/yr);

Ef = Emission factor (lbs./VMT);

$Ef = \{k \times [(sL/2)^{0.91}] \times [(W/3)^{1.02}]\}$

k = constant - 0.011 for PE, 0.0022 for PM10, and 0.00054 PM 2.5 (particle size multiplier for lb/VMT);

sL = road surface silt loading, (7.4 g/m2);

W = mean vehicle weight in tons, 16 tons;

P = number of days with at least 0.01 inches of precipitation per year = 120 days for central Ohio, Figure 13.2.1-2, AP-42, section 13.2.1);

N = number of days in the averaging period = 365 days/year; and

Cf = Control Efficiency, (RACM Table 2.1.1-3, 80%).

Unpaved Roadways:

AERu = (VMT x Ef) x [(365-p)/365] x (1-Cf)

Where:

AERu = Annual Emission Rate unpaved, in tons/yr

VMT = Vehicle Miles Traveled, (0.91 mile x 160,875 loads per year = 146,396.3 VMT/yr);

Ef = size-specific particulate emission factor (lb/VMT)

$Ef = k \times [(s/12)^{"a"}] \times [(W/3)^{"b"}]$

k = constant 4.9 for PE, 1.5 for PM10, and 0.15 PM 2.5 (particle size multiplier for pounds/VMT, AP-42 Table 13.2.2-2)

s = surface material silt content, 6.4%;

W = mean vehicle weight in tons, 16 tons;

a = constant - 0.9 for PE, 0.9 for PM10, and 0.7 PM2.5;

b = constant 0.45for PE, PM10, and PM2.5;

Eext = emission factor extrapolated for natural mitigation, lb/VMT;

p = number of days with at least 0.01 inches of precipitation per year = 120 days for central Ohio, Figure 13.2.2-1, AP-42, section 13.2.2; and

Cf = Control Efficiency, (RACM Table 2.1.1-3, 95%).

<u>Cover /Construction:</u>

AERc = (VMT x Ef) x [(365-p)/365] x (1-Cf)

Where:

AERu = Annual Emission Rate unpaved, in tons/yr

VMT = Vehicle Miles Traveled, (0.91 mile x 16,090 loads per year = 14,641.9 VMT/yr);

Ef = size-specific particulate emission factor (lb/VMT)

$Ef = k \times [(s/12)^{"a"}] \times [(W/3)^{"b"}]$

k = constant 4.9 for PE, 1.5 for PM10, and 0.15 PM 2.5 (particle size multiplier for pounds/VMT, AP-42 Table 13.2.2-2)

s = surface material silt content, 6.4%;

W = mean vehicle weight in tons, 16 tons;

a = constant - 0.9 for PE, 0.9 for PM10, and 0.7 PM2.5;

b = constant 0.45for PE, PM10, and PM2.5;

Eext = emission factor extrapolated for natural mitigation, lb/VMT;

p = number of days with at least 0.01 inches of precipitation per year = 120 days for central Ohio, Figure 13.2.2-1, AP-42, section 13.2.2; and

Cf = Control Efficiency, (RACM Table 2.1.1-3, 95%).

Applicable Compliance Method:

Compliance with above limitations is based on the use of the required control measures and monitoring requirements properly being maintained and performed.

b. Emission Limitation:

There shall be no visible PE from any paved roadway or parking area, except for a period of time not to exceed 1 minute during any 60-minute observation period.

There shall be no visible PE from any unpaved roadway or parking area, except for a period of time not to exceed 3 minutes during any 60-minute observation period.

Applicable Compliance Method:

If required, compliance with the emission limitations 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.

g) Miscellaneous Requirements

(1) None.

2. F002, Material Handling

Operations, Property and/or Equipment Description:

Material handling

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
a.	OAC rule 3745-31-05(A)(3) and PTI 05-13230	Particulate emissions (PE) shall not exceed 8.23 tons per year. Particulate matter with an aerodynamic diameter equal to or less than 10 microns (PM10) shall not exceed 4.04 tons per year. Visible emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average, for all material handling operations. Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust See Section b)(2)a through b)(2)d.
b.	OAC rule 3745-17-07(B)	See Section b)(2)e.
c.	OAC rule 3745-17-08(B)	See Section b)(2)e.

(2) Additional Terms and Conditions

a. The material handling operations that are covered by this permit and subject to the above-mentioned requirements include all operations associated with the handling of the following materials: final and intermediate cover soils, clay liner, and aggregates.

b. The permittee shall employ best available control measures for the above-identified material handling operations 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 minimize drop heights and employ water to suppress dust as needed. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

c. For each material handling operation the above-identified control measures shall be implemented 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 the operation of the material handling operations until further observation confirms that use of the control measures is unnecessary.

d. 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 3745-31-05.

e. This emissions unit is not located in an "Appendix A" area as indicated in OAC rule 3745-17-08. Therefore, the emissions unit is not subject to the RACM requirements established in OAC rule 3745-17-08(B) and the visible emission limitations specified in OAC rule 3745-17-07(B).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, for material handling operations the permittee shall perform daily visible inspections of such operations during each day of operation.

(2) The above-mentioned inspections shall be performed during representative, normal operating conditions.

(3) The permittee may, upon receipt of written approval from Ohio EPA, Southwest District Office, 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.

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

a. the date and reason any required inspection was not performed;

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.

e. The information in 4.d. shall be kept separately for each material handling operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each day during which an inspection was not performed by the required frequency; and

b. each instance when a control measure, that was to be performed 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.

f) Testing Requirements

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

a. Emissions Limitation:

PE shall not exceed 8.23 tons per year.

PM10 shall not exceed 4.04 tons per year.

Applicable Compliance Method:

Compliance may be determined by calculating emissions from each type of material handled and then summing each of the calculated emissions as follows:

First, determine the emissions factor "E" for each material handled and for each PE and PM10 emissions. The emissions factor "E" is determined by using equation (1) in AP-42 (01/1995. Section 13.2.4, Aggregate Handling and Storage Piles. Compilation of Air Pollution Emission Factors, Volume 1: Stationary Point and Area Sources, Fifth Edition.) Second, the emission factor "E" is then multiplied by the mass of material handled per year for each material. Third, the resulting pound per year emission rate for each PE and PM10 emissions is converted to tons per year, i.e., multiply by 1 ton/2000 lbs. Finally, the calculated, annual PE and PM10 emissions are each summarized for all materials handled.

b. E = k(0.0032) [(U/5)1.3 / (M/2)1.4 lb/ton

where:

E = emission factor;

k = particle size multiplier, 0.74 for PE, 0.35 for PM10;

U = mean wind speed, miles per hour, 11 mph; and

M = material moisture content (%), aggregate 0.7%, liner clay 10%, cover soil 12% (Table 13.2.4-1);

TPY = Summation i = 1 ton of (E1)(T1)(1 ton/2000 lbs)

where:

TPY = Annual TPY for PE or PM10;

E1 = the emission factor for each type of material handled for either PE or PM10; and

T1 = the annual tons of material handled for each type of material

g) Miscellaneous Requirements

(1) None.

3. F006, Soil Inoculation Process

Operations, Property and/or Equipment Description:

Soil Remediation operation to process non-hazardous petroleum contaminated soil (PCS) into "re-use" soil

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) b(1)d.

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
a.	OAC rule 3745-31-05(F) (Voluntary Limited based on Application requested limits)	The volatile organic compound (VOC) emissions from this operation shall not exceed 8.4 tons per year. See Sections c)(1), thru c)(6), d)(1), thru d)(5), e)(1) thru e)(3), and f)(1)a., below.
b.	OAC rule 3745-17-11(B)(2)	The particulate emissions from this operation shall not exceed 8.32 pounds per hour See section f)(1)b., below.
c.	OAC rule 3745-17-07(B)(1)	Visible particulate emissions from this fugitive dust emissions unit shall not exceed twenty per cent opacity as a three-minute average. See Section f)(1)c., below.
d.	OAC rule 3745-114-01	io's "Toxic Air Contaminant Statute" See Sections d)(1), d)(2), d)(3), d)(4) and e)(1), below.
e.	OAC rule 3745-31-05(A)(3)(a)(ii) effective 12/01/06	See Sections b)(2)a. and f)(2), below

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	OAC paragraph 3745-31-05(A)(3), as effective 11/30/01	The Total Petroleum Hydrocarbon (TPH) concentration processed in this emissions unit shall not exceed 50,000 parts per million (ppm), and the volatile organic compound (VOC) concentration shall not exceed 10,000 ppm.

(2) Additional Terms and Conditions

a. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions (PE) and volatile organic compound (VOC) emissions from this emissions unit since the potential emissions are less than ten tons per year.

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

c) Operational Restrictions

(1) The total throughput of petroleum contaminated soil (PCS) shall not exceed 15,000 tons per year.

(2) The Total Petroleum Hydrocarbon (TPH) concentration processed in this emissions unit shall not exceed 50,000 parts per million (ppm), and the volatile organic compound (VOC) concentration shall not exceed 10,000 ppm.

(3) This facility shall employ tarps in such a manner that will completely cover the processing material and minimize the amount of time that the petroleum contaminated soils (PCS's) are exposed to the ambient air.

(4) This facility shall inoculate each batch PCS materials with the appropriate amount of natural microbial materials in order to efficiently reduce the TPH of the PCS materials to the "re-use" level within the maximum 90 day processing period.

(5) This facility shall appropriately process PCS loaded trucks in a timely manner in order to minimize and/or eliminate all generated fugitive VOC emission prior to being unloaded into the soil processing area.

(6) All trucks carrying PCS materials shall safely be equipped and employ a cover in order to minimize and/or eliminate the release of fugitive particles emissions (PE) and/or VOC emissions.

d) Monitoring and/or Recordkeeping Requirements

(1) This facility shall maintain annual records on the amount of petroleum contaminated soil (PCS) processed, in tons.

(2) This facility shall maintain the following records on each batch of PCS material processed:

a. The date PCS batch material was received at the facility;

b. The date PCS batch material was unloaded into the processing area;

c. The date that the PCS batch materials were inoculated;

d. The pre-treatment Total Petroleum Hydrocarbon (TPH) level, in parts per million (ppm)[1.] ;

e. The amount of PCS material being processed, in tons;

f. The amount of inoculated natural microbial materials, in pounds, gallons, or tons, whichever is the most appropriate for this type of operation;

g. The date of that the PCS batch material is tested and determined to meet “re-use” action levels;

h. The total number of days that the soil was treated; and

i. The final post-treatment TPH level, in parts per million.

(3) The permittee shall perform daily checks, when the emissions unit is processing PCS materials. The daily checks shall note the following in the operations log:

a. The date of the check;

b. The general condition of the tarp and/or tarps being employed;

c. Any tears, rips, and/or separation on/or between the tarp and/or tarps being employed, in which the PCS materials are exposed to the ambient air; and

d. Any corrective actions taken to eliminate the exposure of PCS materials to the ambient air; and

e. The date that the corrective action was taken.

These daily checks must occur on consecutive days for the first 14 days of each PCS batch. If no tarp tears, rips, and/or separation is noted, the facility can reduce the inspection frequency to once per week during normal facility operation, i.e., exclude weekends and holidays. If any tarp tears, rips, and/or separation is noted, the facility will repair the tarp(s), and inspection frequency reverts to daily.

(4) The permittee shall maintain records on the following information regarding any processing of petroleum contaminated soils (PCS) that takes more than 30 days to remediated the soil to "re use" standards:

a. The amount of PCS processed, in tons;

b. The amount of inoculated natural microbial materials, in pounds, gallons, or tons, whichever is the most appropriate for this type of operation;

c. The average daily temperature, as recorded at the nearest National Weather Service station, during the processing period; and

d. A summary of the operation including any possible reasons for the extended processing periods and possible steps to be taken in the future that would help assure efficient digestion and minimize evaporation of the petroleum contaminates.

(5) Prior to removing the soil from the processing operation, the permittee shall sample and analyze the soil to assure that the concentrations of "chemicals of concern" are not exceeding the levels as indicated in Table 1 of OAC rule 1301:7-9-16(D)(1). These grab samples shall be collected in accordance with the sampling requirements of OAC rule 1301:7-9-17(F) and these grab samples shall be analyzed in accordance to OAC rule 1301:7-9-17(G) and 1301:7-9-13(H)(1)(c).

Once the concentration of the "chemicals of concern" in the soil processed are determined to no longer exceed the standards listed in Table 1 of OAC rule 1301:7-9-16(D)(1), the soil will be determined to be "re-use" soil and may be used according to OAC rule 1301:7-9-16(B)(9).

(6) The PTI P0105394 application for this emissions unit, F006, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The Toxic Air Contaminant Statute, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled Review of New Sources of Air Toxic Emissions, Option A, as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw

materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; or

ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., 24 hours per day and 7 days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

TLV/10 x 8/X x 5/Y = 4 TLV/XY = MAGLC

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or worst case toxic contaminant(s):

Toxic Contaminant: Xylene (total);

TLV (ppm): 100;

Maximum Hourly Emission Rate (lbs/hr): 30.3 (assumed worst case);

Predicted 1-Hour Maximum Ground-Level Concentration (ppm): 0.000000424; and

MAGLC (ppm): 2.38

The permittee, has demonstrated that emissions of Xylene, from emissions unit(s) F006, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

(7) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the

predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the Toxic Air Contaminant Statute will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a “modification”, the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

(8) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to

be in compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. All exceedances of Total Petroleum Hydrocarbon (TPH) concentration of 50,000 parts per million (ppm) for PCS batch material; and

b. any exceedance of the daily limitation on toxic air emissions or any deviation from a restriction on the process or hours of operation, as established by the Director in order to maintain any toxic air contaminant below its MAGLC, and any changes made, during the calendar quarter, to a parameter or value entered into the dispersion model that demonstrate compliance with the Toxic Air Contaminant Statute.

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

[OAC rule 3745-15-03(B)(1)(a)], [OAC rule 3745-15-03(C)], and [OAC rule 3745-77-07(A)(3)(c)]

(2) The permittee shall submit quarterly reports that:

a. identify all days in which any tears, rips, and/or separation on/or between the tarp and/or tarps being employed, in which the PCS materials are exposed to the ambient air are witnessed;

b. Any corrective actions taken to eliminate the exposure of PCS materials to the ambient air;

c. The day that corrective action was taken; and

d. The total number of days that PCS materials were exposed to the ambient air.

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

[OAC rule 3745-15-03(B)(1)(a)], [OAC rule 3745-15-03(C)], and [OAC rule 3745-77-07(A)(3)(c)]

(3) The permittee shall submit quarterly reports that:

a. Identify all incidents in which the processing period for cleaning PCS exceeded 90 days;

b. A summary of the possible causes for the extended processing period; and

c. Possible steps that will be taken to assure proper digestion by the microbes and minimize the evaporation of the petroleum contaminate.

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

[OAC rule 3745-15-03(B)(1)(a)], [OAC rule 3745-15-03(C)], and [OAC rule 3745-77-07(A)(3)(c)]

f) Testing Requirements

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

a. Emission Limitation:

VOC emissions shall not exceed 8.4 tons per year.

The above limitation is based on the following equations:

$$AER = Loadin + Incolution$$

$$Loadin\ AER = \frac{(Pc\ x\ Af\ x\ T\ x\ 1.5\frac{hours}{block}\ x\ \frac{30\ blocks}{year})}{2000}$$

$$Inoculation\ AER = \frac{(Pc\ x\ Af\ x\ T\ x\ 0.25\ \frac{hours}{block}\ x\ \frac{30\ blocks}{year})}{2000}$$

Where:

AER = Annual Emission Rate, in tons;

Loadin= Annual VOC emissions from unloading spreading and tarping block of petroleum contaminated soils (PCS), in tons;

Inoculation= Annual VOC emissions from the inoculation of microbes into the PCS materials, in tons;

Pc = Volatile emissions from the soil being treated, in pounds per feet cubic per spread truckload, (7.36×10^{-7}, from PTI application calculations);

Af= Air flow, in cubic feet per hour, per spread truckload (4.79×10^7, from PTI application calculations); and

T = Number of 42 yd^3 equivalent truckloads per tarped block (9).

Applicable Compliance Method:

Compliance with above limitations is assumed based on the compliance with the above operational restrictions and the record keeping and reporting requirements.

b. Emission Limitation:

Particulate emissions shall not exceed 8.32 pounds per hour.

The above limitation is based on the following equations:

$$A = 0.4239\ x\ U^{0.7493}$$

$$U = \frac{5.7\ x\ s^{1.2}}{M^{1.3}}$$

Where:

A= Maximum Allowable Mass Rate of Emissions, in lbs/hr;

U = Uncontrolled Mass Rate of Emissions, in pounds per hour;

s= silt content, in %, (15.1, (worst case) from AP-42, Chapter 11.9, Table 11.9-3); and

M= moisture content, in %, (2.2, (worst case) from AP-42, Chapter 11.9, Table 11.9-3).

Applicable Compliance Method:

Compliance with above limitations is assumed based on moisture content of the soils both from the petroleum contaminates in the soil and the moisture from the digestion of the microbes being employed.

c. Emission Limitation:

Visible particulate emissions from this fugitive dust emissions unit shall not exceed twenty per cent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

(2) The exemption from OAC rule 3745-31-05(A)(3) for the particulate emissions is based on the following equations:

Potential Controlled particulate emission (PE) is less than 10 tons per year.

$$AER = Loadin\ AER + Loadout\ AER$$

$$Loadin\ AER = \frac{\frac{5.7\ x\ s^{1.2}}{M^{1.3}} x\ 3\ hours\ x\ 30\ blocks}{2000}$$

$$Loadout\ AER = \frac{\frac{5.7\ x\ s^{1.2}}{M^{1.3}} x\ 3\ hours\ x\ 30\ blocks}{2000}$$

Where:

AER= Annual Emission Rate, in tons per year, (0.36);

Loadin AER= Unload emissions, in tons per year, (0.18);

Loadout AER= Loadout emissions, in tons per year, (0.18);

s= silt content, in %, (6.9, from AP-42, Chapter 11.9, Table 11.9-3); and

M= moisture content, in %, (7.9, from AP-42, Chapter 11.9, Table 11.9-3).

Assumed moisture contents are the mean values from Chapter 11.9, Table 11.9-3 and are based on moisture content of the soils both from the petroleum contaminates in the soil and the moisture from the digestion of the microbes being employed.

g) Miscellaneous Requirements

(1) None.

4. P901, Landfill Gas System

Operations, Property and/or Equipment Description:

MSW Landfill with enclosed flare

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific 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
a.	OAC rule 3745-31-05(A)(3) And PTI 05-14428	The annual emissions from the gas recovery operation (stack emissions) shall not exceed the following: 17.5 tons of particulate emissions (PE); 32.3 tons of sulfur dioxide (SO2); 47.9 tons of nitrogen oxides (NOx); 236.2 tons of carbon monoxide (CO); 2.6 tons of Non-methane organic compounds (NMOC); 2.9 tons hydrogen chloride; and 1.0 tons of volatile organic compounds (VOC). The annual fugitive landfill gas emissions shall not exceed the following: 176.4 tons of non-methane organic compounds (NMOC); 68.8 tons of VOC; and 46,172 tons of methane. Comply with the requirements of 40 CFR Part 60 Subpart WWW, 40 CFR Part 61 Subparts A and M, and 40 CFR Part 63 Subpart AAA. See sections b)(2)a., below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-17-07(B) and OAC rule 3745-17-08	See section b)(2)k., below..
c.	40 CFR Part 60, Subpart WWW	See sections b)(2)b. thru f., c)(1) thru (18), d)(1) thru (18), e)(1) thru (4), and f)(1)a. thru h., below.
d.	OAC Chapter 3745-20 and the NESHAP (40 CFR Part 61, Subparts A and M)	See sections b)(2)g. thru j., c)(19) and (20), d)(19) thru (25), e)(5) thru (11), and f)(1)i., below..
e.	40 CFR Part 63, Subpart AAAA	See section b)(2)l., below.

(2) Additional Terms and Conditions

a. The permittee shall ensure that solid wastes are deposited, spread, and compacted in such a manner as to minimize or prevent visible emissions of dust. All truckloads of solid waste shall be unloaded in a manner which will minimize the drop height of the solid wastes. Any dusty materials or wastes likely to become airborne shall be watered as necessary prior to or during dumping operations in order to minimize or eliminate visible emissions of fugitive dust. Watering shall be conducted in such a manner as to avoid the pooling of liquids and runoff. No dusty material shall be dumped during periods of high wind speed, unless the material has been treated to prevent fugitive dust emissions from becoming airborne.

b. The calculated NMOC emission rate for this facility is greater than 50 megagrams per year (Mg/yr), therefore the permittee shall operate a collection and control system that captures the gas generated within the landfill as required below.

i. An active collection system shall:

(a) 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;

(b) 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;

(c) collect gas at a sufficient extraction rate; and

(d) be designed to minimize off-site migration of subsurface gas.

ii. A passive collection system shall:

(a) comply with the provisions specified in b)(2)b.i.; and

(b) be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners shall be installed as required under 40 CFR 258.40.

c. 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.

[40 CFR 60.752(b)(2)(v)]

d. 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.

[40 CFR 60.755(e)]

e. 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.

[40 CFR 63.1960]

f. 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.

[40 CFR 60.753(a)]

g. The landfill, approved to accept asbestos-containing waste materials shall maintain the following work practice standards:

i. There shall be no visible emissions from asbestos-containing waste materials during on-site transportation, transfer, unloading, deposition, compacting operations, or from any inactive asbestos waste disposal sites.

ii. Deposition and burial operations shall be conducted in a careful manner that prevents asbestos-containing waste materials from being broken up or dispersed before the materials are buried

iii. The permittee shall inspect each load of asbestos-containing material delivered to the facility. The inspection shall consist of a visual examination to ensure that each shipment of asbestos-containing waste materials is received in intact, leak-tight containers labeled with appropriate hazard warning labels, the name of the waste generator, and the location of waste generation. The inspection also shall determine whether the waste shipment records accompany the consignment and accurately describe the waste material and quantity.

iv. If on the basis of the inspection, the waste material is found to be improperly received, the load shall be disposed of in accordance with the procedures in the Asbestos Spill Contingency Plan, and the discrepancy shall be noted on the waste shipment record.

[40 CFR 61.154(a) and (e)] and [OAC rule 3745-20-06]

h. The permittee shall develop, implement, and maintain an "Asbestos Disposal Operating Procedure and Spill Contingency Plan" consisting of:

i. authorized personnel training;

ii. inspection and disposal operating procedures;

iii. non-conforming load response procedures;

iv. inventory and maintenance procedures for safety and emissions control equipment;

v. record keeping procedures; and

vi. emergency notification procedures.

Authorized personnel shall be knowledgeable in the procedures, and the Plan shall be available for inspection at this facility at all times. Emissions control equipment shall be available for wetting and containing asbestos in the event of a release or non-conforming load disposal. All equipment required to implement the "Asbestos Disposal Operating Procedure and Spill Contingency Plan" shall be maintained in accordance with good engineering practices to ensure that the equipment is in a ready-to-use condition and in an appropriate location for use.

[OAC rule 3745-20-06, in part] and/or [OAC rule 3745-31-05(A)(3)]

i. The facility can accept for disposal any regulated asbestos-containing material as defined in the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Asbestos, 40 CFR Part 61, Subpart M, Section 141 and OAC rule 3745-20, or any subsequent revisions to either rule. Regulated asbestos-containing material is defined to include:

i. friable asbestos material;

ii. Category I nonfriable asbestos-containing material that has become friable;

iii. Category I nonfriable asbestos-containing material that will be or has been subjected to sanding, grinding, cutting, or abrading; or

iv. Category II nonfriable asbestos-containing material that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

j. The permittee shall ensure that any Category I and/or Category II nonfriable asbestos-containing waste material received does not become friable during processing at the landfill. If any asbestos material arrives at the landfill and meets the description of a regulated asbestos-containing material as described in (a) through (d) above, the landfill shall:

i. cause or permit no visible emissions to the outside air from the asbestos-containing waste materials during on-site transportation, transfer, deposition, or compacting operations;

ii. assure that deposition and burial operations are conducted in a manner which prevents handling by equipment or persons that causes asbestos-containing waste materials to be broken-up or dispersed before the materials are buried;

iii. cover the asbestos-containing waste material with at least twelve inches of non-asbestos-containing material, as soon as practicable after deposition, but no later than at the end of the operating day; and

iv. assure that during the unloading, deposition, burial, and initial compaction of asbestos-containing waste materials, the disposal site is restricted adequately to deter unauthorized entry of the general public and any unauthorized personnel to within one hundred feet of the operations.

[40 CFR 61.154(a) and (c), in part] and [OAC rule 3745-20-06(B)]

k. This emissions unit is not located in an "Appendix A" area as indicated in OAC rule 3745-17-08. Therefore, the emissions unit is not subject to the reasonably available control measures (RACM) requirements established in OAC rule 3745-17-08(B) and the visible emission limitations specified in OAC rule 3745-17-07(B).

l. The requirements of 40 CFR, Part 63, Subpart AAAA also include compliance with the requirements of 40 CFR, Part 60, Subpart WWW.

c) Operational Restrictions

(1) The Landfill Gas Collection and Control Systems at this facility shall be equipped with at least one of the following:

a. an open flare which is designed and operated to reduce NMOC by 98 percent by weight;

b. an enclosed combustion device, which shall either reduce the NMOC by 98 percent by weight or reduce the outlet NMOC concentration to less than 20 ppm by volume, on a dry basis as hexane at 3% oxygen; and/or

c. a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall meet the requirements of 40 CFR 60.752(B)(2)(iii)(A) or (B).

(2) 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 emissions unit P901. 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.

[40 CFR 60.752(b)(2)(iii) and (iv)]

(3) The landfill gas collection system shall satisfy the following requirements, as specified in 40 CFR 60.752(b)(2)(ii)(A):

a. 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;

b. 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;

c. the system shall collect gas at a sufficient extraction rate; and

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

[40 CFR 60.752(b)(2)(ii)(A)] and [40 CFR 60.753(a)]

(4) 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.

(5) If an open flare is used to control landfill gas emissions, it shall be designed and operated as follows:

a. An open 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.

b. An open 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.

c. Open flares shall be steam-assisted, air-assisted, or non-assisted, and shall comply with the following requirements for the heat content and the maximum tip velocity , or shall comply with the alternative requirements for non-assisted flares:

i. 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.

ii. 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:

(a) 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

(b) 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):

$$\text{Log10}\ (V_{max}) = (H_T + 28.8)/31.7$$

where:

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

28.8 = constant;

31.7 = constant; and

H_T = 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:

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

Where:

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

8.706 = constant;

0.7084 = constant; and

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

iii. Non-assisted 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.

[40 CFR 60.18] and [OAC rule 3745-21-10(P)]

(6) 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:

a. 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.

b. 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.

[40 CFR 60.759(a)(1) and (2)]

(7) 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:

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

b. 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.

[40 CFR 60.755(a)(1), in part]

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

a. 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.

b. 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

3.6×10^{-9} = conversion factor.

c. 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.

[40 CFR 60.759(a)(3)]

(9) When the permittee constructs new gas collection devices, the permittee shall use the following equipment or procedures:

a. 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.

b. 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.

c. 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.

[40 CFR 60.759(b)]

(10) 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.

[40 CFR 60.753(b)]

(11) 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 percent or an oxygen level less than 5 percent. The permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

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

b. The oxygen level shall be determined by an oxygen meter using 40 CFR, Part 60, Appendix A, Method 3A, unless an alternative test method is approved by the Administrator, 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.

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

[40 CFR 60.753(c)]

(12) 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.

[40 CFR 60.753(d)]

(13) 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.

[40 CFR 60.753(e)]

(14) The permittee shall operate the control and/or treatment system at all times when the collected gas is routed to the system.

[40 CFR 60.753(f)]

(15) 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.

[40 CFR 60.753(g)]

(16) The permittee shall operate the control device 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.

[40 CFR 60.752(b)(2)(iii)(B)(2)]

(17) 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.

[40 CFR 60.758(a)]

(18) During the unloading, deposition, burial, and initial compaction of asbestos-containing waste materials, the owner or operator of the active waste disposal site shall establish a restricted area adequate to deter the unauthorized entry of the general public and any unauthorized personnel from any location within one hundred feet of the operations. The following information shall be displayed on a sign not less than twenty by fourteen inches, so that it is visible at all entrances, from all directions, and at intervals of three hundred feet or less either along the property line of the facility or along the fencing immediately surrounding the restricted area(s). The signs shall use letter sizes and styles of a visibility at least equal to the following specifications:

Legend:

ASBESTOS WASTE DISPOSAL SITE 2.5 cm (1 inch) Sans Serif, Gothic or Block

DO NOT CREATE DUST 1.9 cm (3/4 inch) Sans Serif, Gothic or Block 14 Point Gothic

BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH 14 Point Gothic

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

[40 CFR 61.154(b)] and [OAC rule 3745-20-06(B)(4) and (5)]

(19) The permittee shall cover and compact asbestos wastes in accordance with the following requirements:

a. As soon as practical after the placement of asbestos, but no later than the end of each working day, the asbestos-containing waste materials deposited at the site during the operating day shall be covered with at least 12 inches of non-asbestos-containing materials. Once the asbestos-containing waste materials are covered, the area shall be compacted.

b. Care shall be taken to ensure that disposed asbestos shall not be re-excavated in subsequent operations. Any accidentally exposed material shall be immediately recovered in accordance with the provisions of this permit.

c. Asbestos-containing waste materials shall be separated from the landfill final grade by no less than 24 inches of compacted non-asbestos-containing materials or by at least 6 inches of compacted non-asbestos-containing materials with a permanent cover of vegetation over the area.

[40 CFR 61.151(a)], [40 CFR 61.154(c) and (g)], [OAC rule 3745-20-06(B)(3)], and [OAC rule 3745-20-07(A)(2) and (3)]

d) Monitoring and/or Recordkeeping Requirements

(1) 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.

[40 CFR 60.753(c)]

(2) 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:

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

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; and

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:

$$Q_m = \sum_{i=1}^{n} 2kL_0M_i \text{ x } (e^{-kti})$$

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 mega gram solid waste;

M_i = mass of solid waste in the ith section, in mega grams; and

t_i = age of the ith section, in years.

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.

[40 CFR 60.755(a)(1) and (2)]

(3) 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.

[40 CFR 60.755(d)]

(4) 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. 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. A/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.

[40 CFR 60.758(c)(2) and (4)]

(5) The permittee shall calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

a. A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame; or, if an enclosed combustor is employed, a temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of +/- 1 percent of the temperature being measured expressed in degrees Celsius or +/-

0.5 degrees Celsius, whichever is greater [a temperature monitoring device is not required for boilers or process heaters with design heat input capacity equal to or greater than 44 megawatts]. If an enclosed combustor is employed, the permittee shall collect and record the following information:

i. all 3-hour blocks of time during which the average combustion temperature within the enclosed combustor was more than 28 degrees Celsius below the average temperature measured during the most recent emission testing that demonstrated the emissions unit was in compliance; and

ii. a log of the downtime for the capture (collection system), control device, and associated monitoring equipment while the emissions unit was in operation.

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

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

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

c. The permittee seeking to demonstrate compliance with the landfill gas collection and control requirements through use of an open flare, 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:

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

ii. all visible emissions readings;

iii. heat content determinations;

iv. flow rate or bypass flow rate measurements;

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

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

vii. 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.

[40 CFR 60.758(b)(4)]

(6) 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.

[40 CFR 60.758(b)(1)]

(7) 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.

[40 CFR 60.758(c)]

(8) 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.

[40 CFR 60.758(d)]

(9) 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.

[40 CFR 60.758(d)(1)]

(10) 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).

[40 CFR 60.758(d)(2)]

(11) The permittee shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system 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.

[40 CFR 60.758(e)]

(12) 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 4.3.1 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 c):

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.

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

[40 CFR 60.755(c)] and [40 CFR 60.756(f)]

(13) The permittee shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in this permit. Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

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

[40 CFR 60.755(c)(5)]

(15) 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.

a. For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with b)(1), 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 b)(2). 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.

[40 CFR 60.755(a)(3) and (4)]

b. 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 b)(2). 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 time line for correcting the exceedance may be submitted to the Director for approval.

[40 CFR 60.755(a)(5)]

(16) The permittee shall keep up-to-date, readily accessible records, for the life of the enclosed combustor control equipment, and as measured during the initial performance test or compliance determination, of the following records:

a. the average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test; and

b. the percent reduction of NMOC Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. achieved by the combustor and determined as specified in 40 CFR 60.752(b)(2)(iii)(B) and this permit.

Records of the control device vendor specifications shall be maintained until removal.

[40 CFR 60.758(b)(2)]

(17) The permittee shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which includes: 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 paper copy or electronic formats are acceptable. These records may be also required by the OEPA, Division of Solid and Infectious Waste Management, and shall satisfy this permit condition.

(18) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from asbestos-containing waste materials during on-site transportation, transfer, unloading, deposition, or compacting operations. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. the total duration of any visible emission incident; and

c. any corrective actions taken to eliminate the visible emissions.

[40 CFR 61.154(a), in part] and [OAC rule 3745-20-06(A) and (B)(1)]

(19) The permittee shall maintain a record of the inspection required in the Additional Terms and Conditions for each load of asbestos-containing material delivered to the facility. These records shall be maintained for a period of 2 years.

[40 CFR 61.154(e)(4)], [OAC rule 3745-20-05(E)(5)], and [OAC rule 3745-20-06(C)(1) and (3)]

(20) The permittee shall maintain a permanent record of the location, depth and area, and quantity in cubic yards of all asbestos-containing waste materials within the disposal site, on a map or a diagram of the disposal area.

[40 CFR 61.154(f) and (g)] and [OAC rule 3745-20-06(C)(2)]

(21) The permittee shall require that all asbestos waste shipments received be accompanied by a waste shipment record. The waste shipment records shall include the following information:

a. the name of the work site or facility where the asbestos-containing waste was generated and the mailing address and telephone number of the facility owner;

b. the name, mailing address and telephone number of the owner or operator (waste generator) responsible for handling, packing, marking, and labeling the asbestos-containing waste material;

c. the name, mailing address, telephone number and site location of the active waste disposal site designated by the generator to receive the asbestos-containing waste material for disposal;

d. the name and address of the local, state or U.S. EPA regional agency responsible for administering the National Emission Standards for Hazardous Air Pollutants (NESHAP) program for asbestos;

e. a description of the asbestos-containing waste materials included in the waste shipment;

f. the number and type of containers included in the waste shipment;

g. the approximate volume of asbestos-containing waste material included in the waste shipment, in cubic yards;

h. special handling instructions or additional information relative to the waste shipment the waste generator may specify;

i. a certification that the contents of this consignment are fully and accurately described by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations;

j. the name, address and phone number of the transporter;

k. a signature by the transporter, to acknowledge receipt of the asbestos-containing waste shipment, described by the waste generator for the conditions recorded on the waste shipment record;

l. a discrepancy indication space to be completed by the transporter or waste shipment owner or operator if any improperly contained asbestos waste is observed or if there is any discrepancy in the quantity of asbestos shipped and the quantity of asbestos waste received at the asbestos waste disposal site;

m. the name and telephone number of the disposal site operator;

n. a signature by the waste disposal site operator to acknowledge receipt of the asbestos-containing waste shipment described by the waste generator in the conditions above, except as noted in the discrepancy indication space; and

o. the date of receipt of the asbestos-containing waste.

Significant amounts of improperly contained waste shall be reported in writing to the appropriate Ohio EPA District Office or local air agency by the following working day. The report shall include a copy of the waste shipment. The waste shipment record forms shall be retained at the facility for at least two years, and shall be made available for inspection upon request.

[40 CFR 61.154(e)] and [OAC rule 3745-20-05(E)]

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

a. the date and reason that any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and

d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

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

(23) The permittee shall inspect each load of asbestos containing-material delivered to this facility as follows:

a. The inspection shall consist of visual examination to ensure that each shipment of asbestos-containing materials is received in intact, leak-tight containers labeled with appropriate hazard warning labels, the name of the waste generator, and the location of waste generation. The inspector also shall determine whether the waste shipment records (WSR) accompany the consignment and accurately describe the waste material and quantity.

b. If on the basis of the inspection, the asbestos-containing waste material is found to be improperly received, the load shall be disposed of in accordance with the procedures in the "Asbestos Spill Contingency Plan," and the discrepancy notation shall be made on the waste shipment record.

c. The owner or on-duty operator shall notify the Ohio EPA of any load of asbestos-containing material which is rejected, or non-conforming in accordance with the Asbestos Spill Contingency Plan. Notification shall be provided as soon as possible by a phone contact, followed in writing the next working day by providing a copy of the waste shipment record, if available, or when waste is not shipped with a WSR, by providing available information on vehicle identification, source of the load, a description of the load, nature of discrepancy, and the location of disposal. If possible, non-conforming loads of suspect friable material shall be detained or the location of disposal protected from damage until the Ohio EPA informed and provided the opportunity to inspect.

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

a. the waste shipment record form for each shipment of asbestos-containing materials; and

b. the location, depth and area, and quantity in cubic yards of all asbestos-containing materials within the disposal site, on a map or diagram, or a 3D grid log of the disposal area.

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 15 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 15 calendar days;

iii. for enclosed combustors, excluding boilers and process heaters with design heat input capacity of 150 million Btu/hour or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28 degrees Celsius below the average combustion temperature during the most recent performance test demonstrating compliance; and

iv. 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 through a bypass line or any indication of periods of bypass of the control device;

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

[40 CFR 63.1955(c) and 63.1980(a), 40 CFR 60.757(f)]

(2) The permittee shall submit an equipment removal report to the Division of Air Pollution Control at the appropriate Ohio EPA office of jurisdiction, 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.

[40 CFR 60.757(e)]

(3) The permittee shall submit a closure report to the Division of Air Pollution Control at the appropriate Ohio EPA office of jurisdiction, 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).

[40 CFR 60.757(d)]

(4) The permittee shall submit quarterly written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from asbestos-containing waste materials during on-site transportation, transfer, unloading, deposition, and/or compacting operations and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31, April 30, July 31 and October 31 and shall cover the previous calendar quarters.

[40 CFR 61.154(a), in part] and [OAC rule 3745-20-06(A) and (B)(1), in part]

(5) The permittee shall submit quarterly reports summarizing the asbestos disposal activities; these reports shall contain the following information:

a. the name, address and location of the facility, the calendar period covered by the report, and any changes in the methods of storage or the disposal operations; and

b. a list of all asbestos-containing waste consignments received including: the date received, the name of the waste generator, the name and location of the facility where the load originated, the quantity of asbestos, and any discrepancy or non-conformity discovered.

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

[40 CFR 61.154(i), in part] and [OAC rule 3745-20-05, in part]

(6) As soon as possible and no longer than 30 days after receipt of the asbestos-containing waste material, the permittee shall send a copy of the signed waste shipment record to the waste generator.

[40 CFR 61.154(e)(2)] and [OAC rule 3745-20-06(E)(2)(b)(ii)]

(7) Upon discovery of a discrepancy between the quantity of asbestos-containing waste material designated on a waste shipment record and the quantity actually received, the permittee shall attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the State, local, district, or U.S. EPA regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and the Director (the appropriate Ohio EPA District Office or local air agency) if the waste was received from out of State. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.

[40 CFR 61.154(e)(3)] and [OAC rule 3745-20-05(E)(2)(b)(iii)]

(8) The permittee shall submit, upon closure of the facility, a copy of the records of the asbestos waste disposal locations and quantities.

[40 CFR 61.154(h)] and [OAC rule 3745-20-06(E)]

(9) The permittee shall notify the Director, in writing, at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. The following information shall be included in the notice:

a. scheduled starting and completion dates;

b. reason for disturbing the waste;

c. procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material (if deemed necessary, the Director may require changes in the proposed emission control procedures); and

d. location of any temporary storage site and the final disposal site.

[40 CFR 61.154(j)], [OAC rule 3745-20-06(F)], and [OAC rule 3745-20-07(D)]

(10) The permittee shall notify the Director of any load of asbestos-containing material which is rejected, or any non-conforming load disposed of in accordance with the "Asbestos Spill Contingency Plan." Notification shall be provided as soon as possible by a phone contact, followed in writing by the next working day. The written notification shall provide a copy of the waste shipment record, if available, or when waste is not shipped with a waste shipment record, provide available information concerning vehicle identification, source of the load, a description of the load, nature of discrepancy, and the location of

disposal. If possible, non-conforming loads of suspect friable material shall be detained, or the location of disposal protected from damage, until the appropriate Ohio EPA District Office or local air agency is informed and provided the opportunity to inspect.

[40 CFR 61.154(e), in part] and [OAC rule 3745-20-05(E)(2)(iii), in part]

f) Testing Requirements

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

a. 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:

MNMOC = 0.00189 (QLFG) CNMOC

Where:

MNMOC = mass emission rate of NMOC, megagrams per year;

QLFG = flow rate of landfill gas, cubic meters per minute; and

CNMOC = NMOC concentration, parts per million by volume as hexane.

b. 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.

c. 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 (AP42). 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.

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.

[40 CFR 60.754(b)]

d. The net heating value of the landfill gas being combusted at the flare shall be calculated as follows:

$$H_T = k \sum_{i=1}^{n} \mathrm{C_i\,H_i}$$

Where:

H_T = 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 x 10^{-7} (1/ppm) (g mole/scm) (MJ/kcal), where the standard temperature for g mole/scm is 20 degrees Celsius;

C_i = concentration of sample component i in ppm on a wet basis; 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 (H_T) from MJ/scm to Btu/scf.

[40 CFR 60.18], [40 CFR 60.754(e)], and [OAC rule 3745-21-10(P)(2)]

e. 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.

[40 CFR 60.18] and [OAC rule 3745-21-10(P)(3)]

f. 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:

MNMOC = 0.00189 (QLFG) CNMOC

Where:

MNMOC = mass emission rate of NMOC, megagrams per year;

QLFG = flow rate of landfill gas, cubic meters per minute; and

CNMOC = NMOC concentration, parts per million by volume as hexane.

g. 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.

h. 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 (AP42). 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.

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.

[40 CFR 60.754(b)]

i. Emission Limitation:

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

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)(c) of OAC rule 3745-17-03.

[40 CFR 61.154], [OAC rule 3745-20-06], and [OAC rule 3745-17-08]

g) Miscellaneous Requirements

(1) None.