Ohio Environmental Protection Agency

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

9/27/2016

Certified Mail

Todd Brady
American Landfill Inc.
7916 Chapel Street SE
Waynesburg, OH 44688

Facility ID: 1576181541
Permit Number: P0117333
County: Stark

RE: PRELIMINARY PROPOSED AIR POLLUTION TITLE V PERMIT
Permit Type: Renewal

Dear Permit Holder:

Enclosed is the Ohio Environmental Protection Agency (EPA)Preliminary Proposed Title V permit that was issued in draft form on 8/3/2016. The comment period for the Draft permit has ended. We are now ready to submit this permit to U.S. EPA for approval.

We are submitting this for your review and comment. If you do not agree with the Preliminary Proposed Title V permit as written, you now have the opportunity to raise your concerns. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the permit or in narrative format. Any comments must be sent to the following within 14 days of your receipt of this letter:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

and

Canton City Health Department
420 Market Avenue
Canton, OH 44702-1544

If you believe that it is necessary to have an informal conference with us, then, as part of your written comments, you should request a conference concerning the written comments.If comments are not submitted within 14 days of your receipt of this letter, we will forward the proposed permit to U.S. EPA for approval. All comments received will be carefully considered before proceeding with the proposed permit.

Sincerely,

Michael E. Hopkins, P.E
Assistant ChiefPermitting Section, DAPC

Cc: Canton City Health Department

Response to Comments

Facility ID:	1576181541
Facility Name:	American Landfill Inc.
Facility Description:	MSW landfill allowed to dispose of Regulated Asbestos Containing Materials, solidifies liquid wastes and disposes of the resulting solid wastes.
Facility Address:	7916 Chapel Street, S.E. Waynesburg, OH 44688 Stark County
Permit:	P0117333, Title V Permit - Renewal
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the The Canton Repository on 08/10/2016. The comment period ended on 09/09/2016.	
Hearing date (if held)	
Hearing Public Notice Date (if different from draft public notice)	

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

1. Topic: None

a. Comment: None

b. Response: None

PRELIMINARY PROPOSED

Division of Air Pollution Control
Title V Permit
for
American Landfill Inc.

Facility ID:	1576181541
Permit Number:	P0117333
Permit Type:	Renewal
Issued:	9/27/2016
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

Ohio Environmental Protection Agency

Division of Air Pollution Control
Title V Permit
for
American Landfill Inc.

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Authorization

Facility ID:	1576181541
Facility Description:	MSW landfill allowed to dispose of Regulated Asbestos Containing Materials, solidifies liquid wastes and disposes of the resulting solid wastes.
Application Number(s):	A0051365
Permit Number:	P0117333
Permit Description:	Title V renewal for an existing landfill that accepts municipal solid waste and certain non-hazardous industrial or special wastes (including asbestos). This permit incorporates terms for the landfill gas carbon dioxide removal project which was installed on 09/12/2014.
Permit Type:	Renewal
Issue Date:	9/27/2016
Effective Date:	To be entered upon final issuance
Expiration Date:	To be entered upon final issuance
Superseded Permit Number:	P0101478

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

American Landfill Inc.
7916 Chapel Street, S.E.
Waynesburg, OH 44688

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

Canton City Health Department
420 Market Avenue
Canton, OH 44702-1544
(330)489-3385

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 Canton City Health Department. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months and no later than 6 months prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director

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 Canton City Health Department. 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 Canton City Health Department 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 Canton City Health Department 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

Officialthat, 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 Canton City Health Department 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 Canton City Health Department) 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 Canton City Health Department 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 Canton City Health Department 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 Requirements Under State Law Only

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or record keeping information shall be submitted to theCanton City Health Department.

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 Canton City Health Department. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

25. Records Retention Requirements Under State Law Only

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

26. Inspections and Information Requests

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

whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

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

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

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the Canton City Health Department 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 Canton City Health Department 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 Canton City Health Department, 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.

2. The facility is subject to the applicable requirements specified in OAC Chapter 3745-25. In accordance with Ohio EPA Engineering Guide #64, the emission control action programs, as specified in OAC rule 3745-25-04, shall be developed and submitted within 30 days after receiving notification from the Ohio EPA.

3. The following insignificant emissions units at this facility must comply with all applicable state and federal regulations, as well as any emissions limitations and/or control requirements contained within the identified permit to install for the emissions unit. The insignificant emissions units listed below are subject to one or more applicable requirement contained in a permit-to-install or in the SIP-approved versions of OAC Chapter 3745-15, 3745-21, and 3745-31.

EU ID	Operations, Property, and/or Equipment Description	Permit-to-Install
G001	Gasoline and Diesel Dispensing Facility; 6,000 gallon and 4,000 gallon diesel storage tanks 550 gallon gasoline and waste oil storage tanks	PTI 15-744 issued 01/08/1992
P013	Emergency John Deere Engine rated at 80 hp for use at Waste Management Energy Services building	PBR14899 issued 02/18/2016

(Authority for term: OAC rule 3745-77-07(A)(13))

3. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions:

   a) National Emission Standards for Hazardous Air Pollutants (NESHAP) for existing and new municipal solid waste (MSW) landfills are established within 40 CFR part 63, subpart AAAA, §63.1930. This subpart requires all landfills described in 40 CFR 63.1935 to meet the requirements of 40 CFR part 60, subpart Cc or WWW and requires timely control of bioreactors. This subpart also requires such landfills to meet the Startup, Shutdown, and Malfunction (SSM) requirements of the general provisions of this part and provides that compliance with the operating conditions shall be demonstrated by parameter monitoring results that are within the specified ranges. It also includes additional reporting requirements.

      (Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1930; PTI 15-01601; and PTI P0115400)

   b) Pursuant to 40 CFR 63.1940, an affected source is defined as follows:

      (1) An affected source of this subpart is a MSW landfill, as defined in 40 CFR 63.1990, that meets the criteria in 40 CFR 63.1935(a) or (b). The affected source includes the entire disposal facility in a contiguous geographic space where household waste is placed in or on land, including any portion of the MSW landfill operated as a bioreactor.

      (2) A new affected source of this subpart is an affected source that commenced construction or reconstruction after November 7, 2000. An affected source is reconstructed if it meets the definition of reconstruction in 40 CFR 63.2 of subpart A.

(3) An affected source of this subpart is existing if it is not new.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1940; PTI 15-01601; and PTI P0115400)

c) Based upon the above definition, American Landfill is an existing affected source. Pursuant to 40 CFR 63.1945(d), "if your landfill is an existing affected source and is a major source or is collocated with a major source, you must comply with the requirements in 40 CFR 63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2), the Federal plan, or EPA approved and effective State or tribal plan that applies to your landfill or by January 13, 2004, whichever occurs later." As such, compliance with this subpart was required by January 13, 2004.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1945(d); PTI 15-01601; and PTI P0115400)

d) The permittee is no longer required to comply with the requirements of this subpart when it is no longer required to apply controls as specified in 40 CFR 60.752(b)(2)(v).

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1950; PTI 15-01601; and PTI P0115400)

e) The permittee is required to comply with the requirements of 40 CFR part 60, subpart WWW. If you are required by 40 CFR 60.752(b)(2) to install a collection and control system, you must comply with the requirements in 40 CFR 63.1960 through 63.1985 and with the general provisions of this part specified in Table 1 of this subpart. For approval of collection and control systems, which include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping, or reporting provisions, you must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been approved under 40 CFR part 60 subpart WWW, these alternatives can be used to comply with this subpart, except that all affected sources must comply with the SSM requirements in 40 CFR part 63, subpart A as specified in Table 1 of this subpart, and all affected sources must submit compliance reports every 6 months as specified in 40 CFR 63.1980(a) and (b). These reports include information on all deviations that occurred during the 6-month reporting period. Deviations for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3-hour monitoring block average.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1955; PTI 15-01601; and PTI P0115400)

f) Compliance is determined in the same way it is determined for 40 CFR part 60, subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d) of subpart WWW, are used to demonstrate compliance with the operating conditions for control systems. If a deviation occurs, you have failed to meet the control device operating conditions described in this subpart and have deviated from the requirements of this subpart. Finally, you must develop and implement a written SSM plan according to the provisions in 40 CFR 63.6(e). A copy of the SSM plan must be maintained on-site. Failure to write, implement, or maintain a copy of the SSM plan is a deviation from the requirements of this subpart.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1960; PTI 15-01601; and PTI P0115400)

g) A deviation is defined in 40 CFR 63.1990. For the purpose of the landfill monitoring and SSM plan requirements, deviations include the items in paragraphs (a) through (c) of this section.

(1) A deviation occurs when the control device operating parameter boundaries described in 40 CFR 60.758(c)(1) of subpart WWW are exceeded.

(2) A deviation occurs when 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-miniute monitoring periods within the hour.

(3) A deviation occurs when a SSM plan is not developed, implemented, or maintained on-site.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1965; PTI 15-01601; and PTI P0115400)

h) Averages are calculated in the same way as they are calculated in 40 CFR part 60, subpart WWW, except that the data collected during the events listed in paragraphs (1), (2), (3), and (4) of this term are not to be included in any average computed under 40 CFR part 63, subpart AAAA:

(1) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.

(2) Startups.

(3) Shutdowns.

(4) Malfunctions.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1975; PTI 15-01601; and PTI P0115400)

i) The permittee shall keep records and reports as specified in 40 CFR part 60, subpart WWW, with one exception: The permittee must submit the annual report described in 40 CFR 60.757(f) every 6 months.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1980(a); PTI 15-01601; and PTI P0115400)

j) The permittee must also keep records and reports as specified in general provisions of 40 CFR part 60 and this part as shown in Table 1 of this subpart. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1980(b); PTI 15-01601; and PTI P0115400)

k) 40 CFR part 63, subpart AAAA can be implemented and enforced by the U.S. EPA or Ohio EPA.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1985(a); PTI 15-01601; and PTI P0115400)

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

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

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

b. fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

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

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1990; PTI 15-01601; and PTI P0115400)

m) As stated in 40 CFR 63.1955 and 63.1980, you must comply with the applicable requirements of 40 CFR part 63, subpart A as specified in Table 1 or subpart AAAA of 40 CFR part 63.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1990; PTI 15-01601; and PTI P0115400)

C. Emissions Unit Terms and Conditions

1. F001, Paved and Unpaved Roadways and parking areas

Operations, Property and/or Equipment Description:

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 15-01601 issued 07/20/2006)	Fugitive particulate emissions (PE) from all paved and unpaved roadways and parking areas shall not exceed 834 tons per year See b)(2)a. Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust See b)(2)d. – b)(2)o. No visible particulate emissions except for 1 minute during any 60-minute period for all paved roadways and parking areas See b)(2)b. No visible particulate emissions except for 3 minutes during any 60-minute period for all unpaved roadways and parking areas See b)(2)c.
b.	OAC rule 3745-17-07(B)(1)	See b)(2)p.
c.	OAC rue 3745-17-08(B)	See b)(2)p.

(2) Additional Terms and Conditions

a. The emissions unit consists of the facility roadways and parking areas and the operation of vehicles on the facility roadways and parking areas. These vehicles include trucks associated with the following:

i. Waste hauling;

ii. Transporting of daily and intermediate cover materials;

iii. Transporting of sand and gravel; and

iv. Earthmoving.

The emissions associated with this emissions unit do not include the emissions from the combustion of fuels in the engines of the trucks.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

b. The paved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements include the following:

i. <u>Paved roadways (for transporting materials obtained from off-site):</u>

The section of Chapel Street S.E., which is west of State Route 44 and leads to the facility and the section of paved roadway, which extends from the end of Chapel Street, S.E., to the facility scales.

ii. <u>Paved parking areas:</u>

Paved parking lots

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

c. The unpaved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements include the following:

i. <u>Unpaved roadways (for transporting materials obtained from off-site and on-site):</u>

All unpaved roadways

ii. <u>Unpaved parking areas:</u>

Unpaved parking lots

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

d. The permittee shall employ best available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the paved roadways and

parking areas by flushing with water and vacuum-sweeping at sufficient treatment frequencies to ensure compliance and enforce a 25 miles per hour (mph) posted speed limit. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

e. 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. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved shoulders of all paved roadways with watering and/or a dust suppressant at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee form employing other control measures to ensure compliance.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

f. The permittee shall employ best available control measures on all unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to enforcing a 10 mph posted speed limit and committed to treating the unpaved roadways and parking areas with water spray and/or a dust suppressant at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

g. 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 of 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.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

h. 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.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

i. 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.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

j. Open-bodied vehicles transporting materials likely to become airborne as fugitive dust shall have such materials covered at all times after the vehicle reaches the scale house until the point of disposal if the control measure is necessary for the materials being transported.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

k. The tires and bodies of all heavy-duty vehicles shall be washed with high pressure water prior to leaving the facility to minimize the carryover of dust or mud to public roadways. This washing shall not be required in freezing weather.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

l. If dust or mud is carried onto the public roadways, it shall be removed, at the latest, by the end of the working day.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

m. This facility shall not remove a paved roadway or parking area and replace it with an unpaved roadway or parking area.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

n. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of Ohio Administrative Code (OAC) rule 3745-31-05.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01601)

p. There are no applicable emission limitations/control measures from OAC rules 3745-17-08(B) and 3745-17-07(B) because the facility is not located in an Appendix A area as specified in OAC rule 3745-17-08.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-17-08(A) and PTI 15-01601)

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform inspections of the roadways and parking areas, in accordance with the following frequencies:

Paved roadways/parking areas	Minimum inspection frequency
Paved roadways and parking areas	Daily as defined in term b)(2)b.

Unpaved roadways/parking areas	Minimum inspection frequency
Unpaved roadways and parking areas	Daily as defined in term b)(2)c.

(Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-01601)

(2) The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspection shall be performed during representative, normal traffic/operating 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 during the next inspection pursuant to the minimum inspection frequency.

(Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-01601)

(3) The permittee shall maintain records of information concerning inspection and control measures.

a. The permittee shall maintain daily records of the following information:

i. 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;

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

iii. the dates the control measures were implemented.

This information shall be kept separately for the paved roadways and parking areas and for the unpaved roadways and parking areas.

b. The permittee shall maintain quarterly records of 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 record shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

(Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-01601)

(4) The permittee shall maintain semi-annual records of the following:

a. the distance in yards that a typical vehicle will travel on the permittee's paved roadways and parking areas in one round trip; and

b. the distance in yards that a typical vehicle will travel on the permittee's unpaved roadways and parking areas in one round trip for purposes of calculating actual annual particulate emissions.

The records shall be maintained individually for each of the following purposes that trucks serve when traveling on the permittee's roadways and parking areas:

i. waste hauling;

ii. transporting of daily and intermediate cover materials;

iii. transporting of sand and gravel; and

iv. transporting of earth.

The distance records for the paved roadways and parking areas shall be recorded to the nearest 10 yards. The distance records for the unpaved roadways and parking areas shall be recorded to the nearest 150 yards.

(Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-01601)

e) Reporting Requirements

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

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

b. each instance when a control measure that was to be implemented as a result of an inspection was not implemented.

(Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-01601)

(2) The deviation reports shall be submitted in accordance with the requirements specified in Part A – Standard Terms and Conditions.

(Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-01601)

(3) The permittee shall submit annual reports that include the annual PE emission rate. These reports shall be submitted by April 15th of each year. These reporting requirements may be satisfied by including and identifying the annual operating hours and specific emission data for this emissions unit in the annual Fee Emissions Report.

(Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-01601)

f) Testing Requirements

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

a. Emission Limitation:

No visible emissions except for 1 minute during any 60-minute period for paved roadways and parking areas

No visible emissions except for 3 minutes during any 60-minute period for unpaved roadways and parking areas

Applicable Compliance Method:

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, 2002, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

No visible emission observations are specifically required to demonstrate compliance with the visible emission limitations, but, if appropriate, may be required pursuant to OAC rule 3745-15-04(A).

(Authority for term: OAC rules 3745-77-07(C)(1); 17-03(B)(1); and PTI 15-1601)

b. Emission Limitation:

834tons of fugitive PE/yr from all paved and unpaved roadways and parking areas

Applicable Compliance Method:

In summary, the maximum controlled emission rate (834tons/yr) for paved/unpaved roadways and parking areas was calculated using a worst case calculation based upon all landfill roads being used to support the 15,000 tons per day waste acceptance rate (Allowable Maximum Daily Waste Receipt, AMDWR), using a mean vehicle weight based upon vehicles used for a particular purpose using landfill roads, and the assumed control efficiencies.

Compliance shall be demonstrated by calculation of the annual fugitive emissions from the plant roadways and parking areas, Total Annual Particulate Emissions (TAPE), using the actual annual Vehicle Miles Traveled (VMT) and comparing the calculated emissions with the emissions limitation.

Calculation of the uncontrolled PTAPE:

The uncontrolled total annual particulate emissions from the paved roadways and parking areas is the uncontrolled PTAPE. It shall be calculated using Equation 2 in Chapter 13.2.1 of AP – 42, Compilation of Air Pollution Emissions Factors, Volume 1: Stationary Point and Area Sources; Fifth Edition, [01/11] to obtain an uncontrolled emission factor with units of pounds of particulate emissions per vehicle mile traveled and multiplying this uncontrolled emission factor by the annual VMT on paved roadways and parking areas.

$$E = [k * (sL)^{0.91} * (W)^{1.02}] * \left(1 - \frac{P}{4N}\right)$$

Where:

E = Uncontrolled emission factor, lbs PE/VMT

k = Particle size multiplier, lb/VMT. Equal to 0.011 lb/VMT per AP-42, Section 13.2.1 Table 13.2.1-1

sL = Road surface silt loading, g/m^2

W = Average weight of vehicles traveling the road, tons

P = Number of days in the year with at least 0.01 inches of precipitation

N = Number of days in the averaging period

The permittee has selected a value of 7.4 g/m^2 for sL whis is the average value for sL for a Municipal Solid Waste Landfill from 13.2.1-3 of AP-42. If a value of sL becomes available which is more representative of the actual landfills soils, the permittee shall use the more representative value in the calculation. A separate value of W shall be calculated for each group of trucks which perform on of the four functions at the landfill (term b)(2)a.). The permittee shall calculate the value of W based on the best historical truck usage data available from this facility. The value of P shall be obtained from sources such as “Climate Atlas of the United States” or the “National Climate Data Center.” The value of N used is the number of days the facility will be open in the year.

The maximum annual VMT shall be calculated for each of the four values of W noted above the VMTW. For each value of W, mileages shall be calculated utilizing the semi-annual records of the distance a typical truck will travel in one round trip from term d)(4) above and the best available information for the actual number of trucks that traveled that distance and summed to obtain the maximum annual VMTW. The four values of the maximum annual VMTW shall be summed to obtain the maximum annual VMT for the paved roadways and parking areas.

Calculation of the uncontrolled UTAPE:

The uncontrolled total annual particulate emissions from the unpaved roadways and parking areas is the uncontrolled UTAPE. The uncontrolled UTAPE shall be calculated using Equation 2 in Chapter 13.2.2 of AP-42, Compilation of Air Pollution Emissions Factors, Volume I: Stationary Point and Area Sources; Fifth Edition, (11/06) to obtain an uncontrolled emission factor with units of pounds of particulate emissions per vehicle miles traveled and multiplying this uncontrolled emission factor by the annual VMT on unpaved roadways and parking areas.

$$E = k * \left(\frac{s}{12}\right)^{0.7} * \left(\frac{W}{3}\right)^{0.45} * \left(\frac{365 - P}{365}\right)$$

Where:

E = Uncontrolled emission factor, lbs PE/VMT

k = Particle size multiplier, lb/VMT. Equal to 4.9 lb/VMT per AP-42, Section 13.2.1 Table 13.2.1-1

s = Surface material silt content, %

W = Average weight of vehicles traveling the road, tons

P = Number of days in the year with at least 0.01 inches of precipitation

The permittee has selected a value of 6.4% for s, which is the average value for s for a Municipal Solid Waste Landfill from Table 13.2.2-1 of AP-42. If a value of s becomes available which is more representative of the actual landfills soils, the permittee shall use the more representative value in the calculation. A separate value of W shall be calculated for each group of trucks which perform one of the four functions at the landfill (term b)(2)a.). The permittee shall calculate the value of W based on the best historical truck usage data available from this facility. The value of P shall be obtained from sources such as the “Climate Atlas of the United States” or the “National Climatic Data Center.”

The maximum annual VMT shall be calculated for each of the four values of W noted above the VMTW. For each value of W, mileages shall be calculated utilizing the semi-annual records of the distance a typical truck will travel in one round trip from term d)(4) above and the best available information for the actual number of trucks that traveled that distance and summed to obtain the maximum annual VMTW. The four values of the maximum annual VMTW shall be summed to obtain the maximum annual VMT for the unpaved roadways and parking areas.

Calculation of the total annual particulate emissions (TAPE):

TAPE, in tons, is equal to the sum of the total annual particulate emissions from the paved roadways and parking areas (PTAPE) in tons plus the total annual particulate emissions from the unpaved roadways and parking areas (UTAPE) in tons.

$$TAPE = PTAPE + UTAPE$$

$$PTAPE = (uncontrolled\ PTAPE) * (1 - fractional\ control\ efficiency)$$

$$UTAPE = (uncontrolled\ UTAPE) * (1 - fractional\ control\ efficiency)$$

The fractional control efficiency of all the control methods used on the paved roadways and parking areas is assumed to be 0.90 according to Table B.2-3 of Appendix B.2 of AP-42 [09/96].

The fractional control efficiency of all the control measured used on the unpaved roadways and parking areas is assumed to be 0.90 according to Table B.2-3 of Appendix B.2 of AP-42 [09/96].

Therefore, the equation for TAPE becomes:

$$TAPE = 0.10 * (PTAPE + UTAPE)$$

If the calculated value of TAPE is less than or equal to 834 tons, compliance will be shown.

(Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-01601)

g) Miscellaneous Requirements

(1) None.

2. P902, MSW Landfill

Operations, Property and/or Equipment Description:

Land disposal of municipal solid waste (included asbestos) and destruction of non-methane organic compounds in municipal solid waste landfill gas. The landfill gas is processed using a four stage compression process and a Pressure Swing Adsorption unit to remove carbon dioxide (gas treatment system) before being delivered to a gas company's natural gas pipeline. The off-gasses resulting from the removal of carbon dioxide are then combusted in a dual-zone Thermal Oxidizer Unit. A landfill gas open flare functions as a backup/supplemental control system.

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) g)(1) through (2), and e)(11)

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) [Best Available Technology (BAT) requirements] (PTI P0115400 issued 05/22/2014) See b)(2)a.	Fugitive emissions of Non-Methane Organic Compounds (NMOC) shall not exceed 167.0 tons per year Fugitive emissions of Methane (CH_4) shall not exceed 26,057 tons/yr Fugitive emissions of Volatile Organic Compounds (VOC) shall not exceed 65.0 tons/yr Fugitive emissions of Hazardous Air Pollutants (HAPs) shall not exceed 23.71 tons/yr Fugitive Particulate Emissions (PE) from the Municipal Solid Waste (MSW) landfill operations shall not exceed 1.64 tons/yr Visible fugitive PE from non-asbestos

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		operations shall not exceed 10 percent opacity as a 6-minute average Best available control measures shall be used for non-asbestos operations that are sufficient to minimize or eliminate visible emissions of fugitive dust See b)(2)v. – z. The requirements established pursuant to this rule are equivalent to the requirements of OAC Chapter 3745-21; 40 CFR Part 61, Subparts A and M; 40 CFR Part 60, Subpart WWW; 40 CFR Part 63, Subpart AAAA and OAC Chapter 3745-19
b.	OAC rule 3745-20 40 CFR Part 61, Subpart A (40 CFR 61.01 – 19) 40 CFR Part 61, Subpart M (40 CFR 61.140 – 157)	See b)(2)b. – i.
c.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 19) 40 CFR Part 63, Subpart A (40 CFR 63.1 – 16)	General Provisions
d.	40 CFR Part 60, Subpart WWW (40 CFR 60.750 – 759) 40 CFR Part 63, Subpart AAAA (40 CFR 63.1930 – 1990)	See b)(2)j. – s. and c)(3) – (11)
e.	OAC rule 3745-31-05(A)(3) OAC rule 3745-31-05(F) [Voluntary Restrictions to avoid PSD requirements] (PTI P0115400 issued 05/22/2014) See b)(2)a. for additional information	Emissions from the control device(s) shall not exceed the following: NMOC emissions shall not exceed 0.80 pound per hour (lb/hr) and 3.50 tons/yr VOC emissions shall not exceed 0.31 lb/hr and 1.36 tons/yr Particulate emissions with a diameter of 10 microns or less (PE/PM_{10}) shall not exceed

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		2.66 lb/hr and 11.65 tons/yr Carbon Monoxide (CO) emissions shall not exceed 58.42 lbs/hr and 235.30 tons/yr Nitrogen Oxide (NO_x) emissions shall not exceed 10.74 lbs/hr and 46.30 tons/yr Sulfur Dioxide (SO_2) emissions shall not exceed 2.34 lbs/hr and 10.25 tons/yr Hydrogen Chloride (HCl) emissions shall not exceed 1.20 lbs/hr and 5.30 tons/yr See b)(2)t. and c)(10)
f.	OAC rule 3745-17-07(B)(1)	Not Applicable See b)(2)u.
g.	OAC rule 3745-17-08(B)	Not Applicable See b)(2)u.
h.	OAC rule 3745-19	See c)(2)
i.	ORC 3704.03(F)(4)(d)	Air Toxics Policy See g)(1) – (2)

(2) Additional Terms and Conditions

a. Modifications from the previous TV renewal P0101478 include Best Available Technology (BAT) emission limitations that have been altered in Administrative Modification P0115400. The main modifications include:

i. allow the facility to install control device(s) in the future as the landfill gas generation increases;

ii. increase the total rolling average landfill gas (LFG) from 2,226,000,000 standard cubic feet (scf) per year to 2,628,000,000 scf/yr fed to the control devices;

iii. establish total rolling average LFG of 2,273,220,000 scf/yr fed to the flare;

iv. install a Pressure Swing Adsorption (PSA) unit and a dual-zone Thermal Oxidizer Unit (TOU) as part of a Landfill gas CO_2 Removal Project to be incorporated as part of the existing gas treatment system; and

v. landfill gas generated on the facility is captured and collected by the facility's landfill gas collection and control system and then processed by the on-site gas treatment system which includes the Landfill Gas CO_2 Removal System, all of which are included as part of this emissions unit. The treated gas is then sent off-site for its subsequent use as pipeline quality natural gas. The on-site gas treatment system is expected to have zero additional emissions. The Landfill Gas CO_2 Removal system is controlled by the TOU. The landfill gas flare functions as a backup/supplemental control system which is only used when the gas treatment system is not operating properly, is taken off-line for maintenance, or if more gas is collected than the gas treatment system can accommodate.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0115400)

b. There shall be no visible emissions to the outside air from asbestos-containing waste materials during the on-site transportation, transfer, deposition or compacting operations.

(Authority for term: OAC rules 3745-77-07(A)(1); 3745-20-06(B)(1); and PTI P0115400)

c. Deposition and burial operations shall be 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.

(Authority for term: OAC rules 3745-77-07(A)(1); 3745-20-06(B)(2); and PTI P0115400)

d. The permittee shall cover and compact asbestos-containing waste materials in accordance with the following:

i. as soon as practical after deposition of the asbestos-containing waste materials, but no later than the end of each operating day, the asbestos-containing waste materials deposited at the site during the operating day shall be covered with at least 12 inches of compacted nonasbestos-containing materials. Alternatively, the permittee may apply for approval of the director to utilize alternative control methods to bind dust, control wind erosion or convert asbestos to nonfriable forms.

ii. care shall be taken to ensure that disposed asbestos shall not be re-excavated in subsequent operations. Any accidentally exposed material shall be immediately recovered in accordance with the provisions of term b)(2)d.i. above.

(Authority for term: OAC rules 3745-77-07(A)(1); 3745-20(B)(3); and PTI P0115400)

e. During the unloading, deposition, burial and initial compaction of asbestos-containing waste materials, the permittee 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 on hundred feet of the operations.

(Authority for term: OAC rules 3745-77-07(A)(1); 3745-20-06(B)(4); and PTI P0115400)

f. The permittee shall display the following information on a sign not less than 20 x 14 inches, so that is is visible at all entrances and at intervals of 300 feet or less along the property line or fencing immediately surrounding the restricted area using letter sizes and styles of a visibility at least equal to the following specifications:

Legend	Notation
Asbestos Waste Disposal Site	2.5 cm (1 inch) Sans Serif, Gothic or Block
Do Not Create Dust	2.5 cm (1 inch) Sans Serif, Gothic or Block
Breathing Asbestos Is	at least 1.9 cm (3/4 inch) Sans Serif, Gothic or Block
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.

(Authority for term: OAC rules 3745-77-07(A)(1); 3745-20-06(B)(5); and PTI P0115400)

g. The permittee shall implement and maintain an "Asbestos Disposal Operating Procedure and Spill Contingency Plan" (Plan) consisting of authorized personnel training, inspection, and disposal operating procedures, non-conforming load response procedures, inventory and maintenance procedures for safety and emissions control equipment, recordkeeping procedures, and emergency notification procedures. Authorized personnel shall be knowledgeable in the procedures, and the Plan shall be available for inspection at this facility at all times.

(Authority for term: OAC rule 3745-77-07(A)(1); to ensure compliance with 3745-20 and 40 CFR part 61, subpart M; and PTI P0115400)

h. Emissions control equipment shall be available for wetting and containing asbestos in the event of a release of non-conforming load disposal. All equipment required to implement the 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.

(Authority for term: OAC rule 3745-77-05(A)(3); to ensure compliance with 3745-20 and 40 CFR part 61, subpart M; and PTI P0115400)

i. Upon closure of the facility, or portions thereof, the permittee shall comply with all the provisions of rule 3745-20-07 of the Administrative Code and shall submit a copy of the records of the asbestos waste disposal locations and quantities to the director.

(Authority for term: OAC rules 3745-77-07(A)(1); 3745-20-06(E); and PTI P0115400)

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

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1930; and PTI P0115400)

k. The calculated Non-Methane Organic Compounds (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. The active collection system shall satisfy the following requirements:

i. the system shall be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;

ii. the system shall collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of 5 years or more if active, or 2 years or more if closed or at final grade;

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

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

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.752(b)(2)(ii)(A); and PTI P0115400)

l. If the permittee seeks to demonstrate compliance with term b)(2)k. through the use of a collection system not conforming to the specification provided in term b)(2)o. through q., the permittee shall provide information satisfactory to the Canton City Health Department, Air Pollution Control Division to demonstrate that off-site migration is being controlled.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.752(b)(2)(i)(C); and PTI P0115400)

m. The design plan required in this section has been submitted to the Canton City Health Department, Air Pollution Control Division. The design plan included appropriate alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping, or reporting provisions of 40 CFR 60.753 through 60.758 proposed by the permittee. The collection and

control system design plan conforms to specifications for active collection systems in 40 CFR 60.759 and has been approved.

Many site-specific factors must be taken into consideration in landfill gas system design and alternative systems may be necessary. Therefore, the permittee must notify the Canton City Health Department, Air Pollution Control Division when an alternative design is determined to be necessary to meet the requirements of this section.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.752(b)(2)(i)(A, B, and D); and PTI P0115400)

n. The permittee shall 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 5 years or more if active; or 2 years or more if closed or at final grade.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.755(b); and PTI P0115400)

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

i. The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design:

(a) depths of refuse;

(b) refuse gas generation rates and flow characteristics;

(c) cover properties;

(d) gas system expandability;

(e) leachate and condensate management;

(f) accessibility;

(g) compatibility with filling operations;

(h) integration with closure end use;

(i) air intrusion control;

(j) corrosion resistance;

(k) fill settlement; and

(l) resistance to the refuse decomposition heat.

(Authority for term: OAC 3745-77-07(A)(1); 40 CFR 60.759(a)(1); and PTI P0115400)

ii. The sufficient density of gas collection devices determined in term b)(2)o.i. above shall address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.759(a)(2); and PTI P0115400)

p. The placement of gas collection devices shall control all gas producing areas, except as provided by terms b)(2)p.i. and ii. below.

i. Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under term d)(14). The documentation shall provide the following and shall be provided to the Director upon request:

(a) nature of asbestos or nondegradable material deposited in the area;

(b) date of deposition;

(c) location of deposition; and

(d) amount of asbestos or nondegradable material deposited in the area.

ii. Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute to 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:

$$Q_i = 2 * k * L_o * M_i * \left(e^{-kt_i} * C_{NMOC} * (3.6 * 10^{-9})\right)$$

Where:

Q_i = NMOC emission rate from the ith section, megagrams per year (Mg/yr)

k	=	methane generation rate constant, year^{-1}
L_o	=	methane generation potential, cubic meters per megagram solid waste (M^3/mg)
M_i	=	mass of the degradable solid waste in the ith section, megagram (Mg)
t_i	=	age of the solid waste in the ith section, years
C_{NMOC}	=	concentration of nonmethane organic compounds, parts per million by volume (ppmv)
$3.6 * 10^{-9}$	=	conversion factor

iii. The values for k 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 (this distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for k, Lo, and C_{NMOC} provided in 40 CFR 60.754(a)(1) as shown below shall be used:

k*	=	0.05 per year
L_o	=	170 m^3/Mg
C_{NMOC}	=	4,000 ppmv as hexane

*For landfills located in geographical areas with a 30 year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorological site, the k value to be used is 0.02 per year.

The permittee may use other methods to determine the NMOC concentration or a site-specific k in accordance with 40 CFR 60.754(a)(5) as an alternative if the method has been approved by the Director. The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in term b)(2)p.i.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.759(a)(3); and PTI P0115400)

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

i. The landfill gas extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to:

(a) convey projected amounts of gases;

(b) withstand installation, static, and settlement forces; and

(c) withstand planned overburden or traffic loads.

The collection system shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration.

ii. Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.

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

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.759(b); and PTI P0115400)

r. The collection and control system may be capped or removed provided that all of the following conditions are met:

i. the landfill shall be a closed landfill as defined in 40 CFR 60.751. A closure report shall be submitted to the Canton City Health Department, Air Pollution Control Division as provide din 40 CFR 60.757(d);

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

iii. following the procedures specified in 40 CFR 60.754(b), the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year (55.1 tons/yr) on 3 successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.752(b)(2)(v); and PTI P0115400)

s. The permittee shall route all the collected gas to a control system that complies with the requirements in one of the following options:

i. An open flare shall be designed and operated as follows:

(a) the flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes, during any 2 consecutive hours;

(b) the flare shall be operated with a flame present at all times, as determined by the methods specified in 40 CFR 60.18(f); and

(c) the permittee shall comply with either the heat content specifications in term b)(2)s.i.(c)(i) below and the maximum tip velocity specifications in term (ii) below, or the requirements in term (iii) below:

(i) Flares shall be used only with the net heating value of the gas being combusted being 11.2 megajoule per standard cubic meter (MJ/scm) (300 British thermal unit per standard cubic feet (Btu/scf)) or greater if the flare is steam-assisted or air-assisted, or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted shall be determined as follows or by utilizing methods approved by the Canton City Health Department, Air Pollution Control Division in accordance with 40 CFR Part 60, Subpart WWW:

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

Where:

H_T = net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 degrees Celsius (°C) and 760 millimeter of mercury (mm Hg), but the standard temperature for determining the volume corresponding to one mole is 20°C;

k = constant, $1.740 * 10^{-7} \left(\frac{1}{ppm}\right)\left(\frac{g\ mole}{scm}\right)\left(\frac{MJ}{kcal}\right)$ where the standard temperature for $\left(\frac{g\ mole}{scm}\right)$ is 20°C;

C_i = concentration of sample component i in ppm on a wet basis, as measured for organics by

Reference Method 18 and measured for hydrogen and carbon monoxide by using the American Society for Testing and Materials (ASTM) Method D1946-77 or 90; and

H_i = net heat of combustion of sample component i, $\frac{kcal}{g\ mole}$ at 25°C and 760 mm Hg. The heats of combustion may be determined using ASTM Method D2382-76 or 88 or D4809-95 if published values are not available or cannot be calculated

(ii) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in term f)(4), less than 18.3 m/sec (60 ft/sec), except as provided by the following:

1) steam-assisted and nonassisted flares 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) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf); and

2) steam-assisted and nonassisted flares designed for and operated with an exit velocity less than the velocity, V_{max}, and less than 122 m/sec (400 ft/sec) are allowed, as determined by:

$$\log_{10} V_{max} = \frac{H_T + 28.8}{31.7}$$

Where:

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

28.8 = constant; and

31.7 = constant

(iii) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 ms/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:

X_{H2} = volume-percent of hydrogen, on a wet basis, as calculated by the using ASTM Method D1946-77, or utilizing methods approved by the Canton City Health Department, Air Pollution Control Division in accordance with 40 CFR Part 60, Subpart WWW; and

K_1 = constant, 6.0 volume-percent hydrogen; and

K_2 = constant, $\frac{3.9\,m/sec}{volume-percent\ hydrogen}$

(iv) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, V_{max}, as determined by the following equation:

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

Where:

8.706 = constant; and

0.7084 = constant

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

(Authority for term: 40 CFR 60.752(b)(2)(iii)(A); 40 CFR 60.18(c); and PTI P0115400)

ii. A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in 40 CFR 60.754(d) (See section f) below).

(a) If a boiler or process heater is used as a control device, the landfill gas stream shall be introduced into the flame zone.

(b) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in 40 CFR 60.756.

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

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.752(b)(2)(iii); and PTI P0115400)

t. The emission limitations for the control devices have been established based upon a maximum gas collection rate of 5,000 scfm and the expected landfill gas quality. The landfill's maximum potential to emit is 14,280 scfm as predicted by U.S. EPA's Landfill Gas Estimation program (LANDGEM), AP-42 emission factors, and standard industry assumptions is not expected to occur until 2038 if the facility were to accept its authorized maximum daily waste each day. The facility is currently processing all landfill gas in the gas treatment system prior to delivery to the gas company's natural gas pipeline. Alternate control devices are being permitted as a backup/supplemental control method in the event that the gas treatment system is inoperable and to control emissions from the gas treatment system PSA. Based upon the above, the facility has committed to the following:

i. The facility shall apply for a permit to install additional control device capacity within 180 days of capturing greater than 90 percent of the maximum landfill gas collection rate (4,500 scfm) as an annual average.

ii. The facility shall install additional control device(s), as necessary, to maintain compliance with the requirements in 40 CFR 60.752(b)(2)(iii) and the emission limitations contained in term b)(1)e. This will be accomplished by selecting and installing new replacement and/or additional control device(s) when the capacity of the current control method(s)/device(s) will no longer control the volume of gas emitted by the landfill.

iii. The selected control device(s) must be capable of demonstrating compliance based upon the calculations contained in section f) of this permit.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.752(b)(2)(iv); and PTI P0115400)

u. There are no applicable emission limitations/control measures from OAC rules 3745-17-08(B) and 3745-17-07(B) because the facility is not located in an Appendix A area as specified in OAC rule 3745-17-08.

(Authority for term: OAC rules 3745-17-07; 3745-17-08; and PTI P0115400)

v. 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 construction materials, soils, 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 speeds, unless the material has been treated to prevent fugitive dust emissions from becoming airborne.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0115400)

w. The following material handling activities are covered by this permit:

i. The non-asbestos material handling activities that are covered by this permit and subject to the above-mentioned annual fugitive mass particulate emissions (PE) limitation and the visible fugitive PE limitation for non-asbestos operations are listed below:

Waste handling (depositing, spreading, and compacting)

Landfill daily and intermediate cover handling

Wind erosion from landfill surfaces

General earthmoving and soil handling during landfill construction

Landfill aggregate handling during landfill construction

ii. The asbestos-containing waste material handling activities that are covered by this permit and subject to the above-mentioned visible fugitive PE limitation for asbestos-containing waste material operations are listed below:

On-site transportation

Transfer

Unloading

Deposition

Compacting

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0115400)

x. The permittee shall employ best available control measures on all activities listed in term b)(2)w. for the purpose of ensuring compliance with the above-mentioned applicable requirements (particulate emission limitations). In accordance with the permittee's PTI 15-01601 application, the permittee has committed to the following:

i. covering the active storage piles or spraying them with water or a surfactant solution as necessary to control fugitive dust; and

ii. covering the inactive storage piles with vegetation or another type of cover or spraying them with water or a surfactant solution as necessary to control fugitive dust.

Nothing in this paragraph shall prohibit the permittee form employing other control measures to ensure compliance.

(Authority for term: OAC rules 3745-77-07(A)(1) and PTI P0115400)

y. 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 if there is snow and/or ice cover or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements (particulate emission limitations). Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0115400)

z. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05.

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

ii. The permittee shall employ control measures, including the application of best available technology (BAT), for the purpose of ensuring compliance with OAC rule 3745-15-07.

(Authority for term: OAC rules 3745-77-07(A)(1) and PTI P0115400)

c) Operational Restrictions

(1) The permittee shall be limited to accepting for disposal no more than 4,605,000 tons of waste material per calendar year.

(Authority for term: OAC rules 3745-77-07(A)(1) and PTI P0115400)

(2) There shall be no open burning in violation of OAC rule 3745-19 at this facility.

(Authority for term: OAC rules 3745-77-07(A)(1); 3745-31-05(A)(3); and PTI P0115400)

(3) 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 2 years or more if closed or at final grade, and as required in 40 CFR 60.752, 40 CFR 60.753, and this permit. The collection and control system shall meet the specifications for an active collection system as required in 40 CFR 60.759, included in this permit.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.753(a); and PTI P0115400)

(4) The permittee shall operate the collection system with negative pressure at each well head except under the following conditions:

a. a fire or increased well temperature [The permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 40 CFR 60.757(f)(1) and as specified in term e)(8)f.];

b. use of a geo-membrane or synthetic cover [The permittee shall develop acceptable pressure limits in the design plan]; or

c. a decommissioned well. [A well may experience a static positive pressure after the shutdown to accommodate for declining flows. All design changes shall be approved by Ohio EPA and the Canton City Health Department, Air Pollution Control Division.]

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.753(b); and PTI P0115400)

(5) The permittee shall operate each interior wellhead in the collection system with a landfill gas temperature less than 55° C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

a. The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by 40 CFR 60.752(b)(2)(i).

b. Unless an alternative test method is established as allowed by 40 CFR 60.752(b)(2)(i), the oxygen shall be determined by an oxygen meter using Method 3A 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 calibrations error check is not required; and

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

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.753(c); and PTI P0115400)

(6) 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 owner or operator shall conduct surface testing 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 owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

The permittee shall install a new well or other collection device for any location where the monitored methane concentration equals or exceeds 500 ppm above background three times within a quarterly period and within 120 calendar days of the initial exceedance. (An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted at the Canton City Health Department, Air Pollution Control Division for approval.)

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.753(d); 40 CFR 60.755(c)(4)(v); and PTI P0115400)

(7) The permittee shall operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR 60.752(b)(2)(iii) unless the collected gas is routed to a treatment system that processes the collected gas for subsequent sale. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.753(e); and PTI P0115400)

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

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.753(f); and PTI P0115400)

(9) 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 recordkeeping requirements for the pressure, temperature, oxygen or nitrogen concentration at each well's gas collection header and surface methane measurements. If corrective actions are taken as specified in 40 CFR 60.755, the monitored exceedance is not a violation of the operational requirements.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.753(g); and PTI P0115400)

(10) The facility's current control devices, consisting of a TOU and an open flare, shall be limited to inputting combined less than or equal to 2,628,000,000 scf of landfill gas per year rolling average (based on a maximum of 5,000 scfm). The facility's current open flare control device shall be limited to inputting individually less than or equal to 2,273,220,000 scf of landfill gas per year rolling average. Upon replacement of the current control devices, the permittee shall comply with term b)(2)t. above.

(Authority for term: OAC rules 3745-77-07(A)(1); 3745-31-05(F); and PTI P0115400)

(11) The provisions of 40 CFR part 60, subpart WWW apply at all times, except during periods of startup, shutdown, or malfunction, provided that the duration of startup, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment of control devices, in which case any deviation from the requirements shall be recorded and included in the semiannual report.

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 60.755(e); and PTI P0115400)

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

(Authority for term: OAC rule 3745-77-07(A)(1); 40 CFR 63.1960; 40 CFR 63.6; and PTI P0115400)

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall inspect each load of asbestos-containing waste material delivered to the facility. The inspection shall consist of a 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 inspection also shall determine whether the waste shipment records accompany the consignment and accurately describe the waste material and quantity.

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 records.

(OAC rules 3745-77-07(C)(1) and PTI P0115400)

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

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

b. 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.

(Authority for term: OAC rules 3745-77-07(C)(1) and PTI P0115400)

(3) Except as provided in 40 CFR 60.752(b)(2)(i)(B), each owner and operator of an MSW landfill subject to the provisions of 40 CFR 60.752(b) shall keep for at least 5 years up to date, readily accessible, on-site records of the design capacity report which triggered 40 CFR 60.7582(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.758(a); and PTI P0115400)

(4) Except as provided in 40 CFR 60.752(b)(2)(i), each owner or operator seeking to comply with 40 CFR 60.752(b)(2)(ii)(A) for an active gas collection system shall install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead, and:

a. measure the gauge pressure in the gas collection header (at each wellhead) on a monthly basis as provided in 40 CFR 60.755(a)(3);

b. monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in 40 CFR 60.755(a)(5); and

c. monitor temperature of the landfill gas on a monthly basis as provided in 40 CFR 60.755(a)(5)

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.756(a); and PTI P0115400)

(5) Each owner or operator seeking to comply with 40 CFR 60.752(b)(2)(iii) using an enclosed combustor shall install, calibrate, maintain, and operate the following equipment according to the manufacturer's specifications:

a. A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius of ±0.5 °C, 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.

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

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

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

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.756(b); and PTI P0115400)

(6) Each owner or operator seeking to comply with 40 CFR 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate the following equipment according to the manufacturer's specifications:

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.

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

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

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

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 63.756(c); and PTI P0115400)

(7) Except as provided in 40 CFR 60.752(b)(2)(i)(B), each owner or operator seeking to demonstrate compliance with 40 CFR 60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in 40 CFR 60.755(d). 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.

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.756(f); and PTI P0115400)

(8) Except as provided in 40 CFR 60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment, of the data listed in term d)(8)a. below as measured during the initial performance test or compliance determination. 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.

a. Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(ii):

i. The maximum expected gas generation flow rate as calculated in 40 CFR 60.755(a)(1) (See section f)). The owner or operator may use another method to determine the maximum gas generation flow rate if the method has been approved by the Canton City Health Department, Air Pollution Control Division.

ii. 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).

b. Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air-assisted, or non-assisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.758(b)(1); 60.758(b)(4); and PTI P0115400)

(9) Except as provided in 40 CFR 60.752(b)(2)(i)(B), each owner or operator 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 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.

a. The following constitute exceedances that shall be recorded and reported under 40 CFR 60.757(f) and term e)(8)f.:

i. For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal units per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28 °C below the average combustion temperature during the most recent performance test at which compliance with 40 CFR 60.752(b)(2)(iii) was determined.

ii. For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under paragraph 40 CFR 60.758(b)(3).

b. Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspection of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR 60.756.

c. Each owner or operator subject to the provisions of this subpart who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with 40 CFR 60.752(b)(2)(iii) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, tribal, or Federal regulatory requirements.)

d. Each owner or operator seeking to comply with the provisions of this subpart by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 40 CFR 60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.758(c)(1) through (c)(4); and PTI P0115400)

(10) Except as provided in 40 CFR 60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart 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.

a. Each owner or operator subject to the provisions of this subpart 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).

b. Each owner or operator subject to the provisions of this subpart shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or non-degradable waste excluded from collection as provided in 40 CFR 60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in 40 CFR 60.759(a)(3)(ii).

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.758(d); and PTI P0115400)

(11) Except as provided in 40 CFR 60.752(b)(2)(i)(B), each owner or operator subject to the provisions of 40 CFR part 60, subpart WWW shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operations standards in 40 CFR 60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.758(e); and PTI P0115400)

(12) This facility shall maintain monthly records of the following:

a. The amount of landfill gas, in scf, produced by the landfill;

b. the amount of landfill gas, in scf, input to the open flare and/or the enclosed combustor;

c. the number of hours that the open flare and/or enclosed combustor was (were) operated; and

d. the amount of landfill gas, in scf, input to the treatment system that processes the gas for subsequent sale or use.

(Authority for term: OAC rules 3745-77-07(C)(1) and PTI P0115400)

(13) The permittee shall perform the following inspections:

a. The permittee shall perform daily inspections to observe the following non-asbestos material handling activities when the activities are being conducted:

i. Waste handling (depositing, spreading and compacting)

ii. Landfill daily and intermediate cover handling

iii. Wind erosion from landfill surfaces

iv. General earthmoving and soil handling during landfill construction

v. Landfill aggregate handling during landfill construction

b. For the material handling activities (on-site transportation, transfer, unloading, deposition, and compacting operations) of asbestos-containing waste materials, the permittee shall perform daily inspections to observe the activities when the activities are being conducted.

c. The inspections shall be documented and recorded as required in term d)(15) below.

(Authority for term: OAC rules 3745-77-07(C)(1) and PTI P0115400)

(14) No inspection shall be necessary when the non-asbestos material handling activities are not being conducted, when there is snow and/or ice cover, and/or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned visible fugitive PE limitation. Any required inspection that is not performed due to any of the above-identified events shall be performed during the next inspection pursuant to the minimum inspection frequency.

a. The purpose of the non-asbestos material handling activities inspections is to determine the need for implementing the control measures specified in this permit to minimize and eliminate visible emissions of fugitive dust from the activities. The inspections shall be performed during representative, normal landfill operating conditions.

b. The purpose of the asbestos-containing waste material handling activities inspections is to determine the need for implementing the control measures specified in this permit to eliminate visible emissions of fugitive dust from the activities. The inspections shall be performed during representative, normal landfill operating conditions.

(Authority for term: OAC rules 3745-77-07(C)(1) and PTI P0115400)

(15) The permittee shall maintain a daily operations log which lists all of the above landfill activities. (Note that if the records required in this Term and Condition exactly duplicate any records required under the facility's Division of Solid and Infectious Waste Management (DSIWM) permit, the DSIWM record will suffice to meet this Term and Condition). The daily operations log shall clearly indicate/contain the following:

a. the date and whether an inspection was performed and, if not performed, the reason why the inspection was not performed, including those inspections that were not performed due to snow and/or ice or precipitation;

b. the activities which were in operation;

c. each activity where it was determined by the person conducting the inspection that is was necessary to implement the control measures to meet the above-mentioned visible fugitive PE/PM_{10} limitation;

d. whether control measures were employed to minimize or eliminate visible emissions of fugitive dust; and

e. with regards to the waste handling activities, the amount, in tons, of waste material accepted for disposal.

(Authority for term: OAC rules 3745-77-07(C)(1) and PTI P0115400)

(16) The permittee shall maintain an annual cumulative (calendar year) record to be updated quarterly:

a. of days inspections were not performed by the required frequency; and

b. of days in which control measures were determined to be necessary by an inspector, but were not implemented.

(Authority for term: OAC rules 3745-77-07(C)(1) and PTI P0115400)

e) Reporting Requirements

(1) The permittee shall submit quarterly reports summarizing the asbestos-containing waste material disposal activities. The 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 material consignments received including:

i. the date received;

ii. the name of the waste generator;

iii. the name and location of the facility where the load originated;

iv. the quantity of asbestos-containing waste material; and

v. any discrepancy or nonconformity discovered.

These quarterly reports shall be submitted to the Canton City Health Department, Air Pollution Control Division no later than January 31, April 30, July 31 and October 31 and shall cover the previous calendar quarters.

(Authority for term: OAC rules 3745-77-07(C)(1); 3745-20-05; 40 CFR 61.154(i); and PTI P0115400)

(2) 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.

(Authority for term: OAC rules 3745-77-07(C)(1); 3745-20-06(E)(2)(b)(ii); and 40 CFR 61.154(e)(2); and PTI P0115400)

(3) Upon discover 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, if different, the Canton City Health Department, Air Pollution Control Division. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.

(Authority for term: OAC rules 3745-77-07(C)(1); 3745-20-05(E)(2)(b)(iii); 40 CFR 61.154(e)(3); and PTI P0115400)

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

(Authority for term: OAC rules 3745-77-07(C)(1); 3745-20-06(E); 40 CFR 61.154(h); and PTI P0115400)

(5) The permittee shall notify the Canton City Health Department, Air Pollution Control Division, 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.

(Authority for term: OAC rules 3745-77-07(C)(1); 3745-20-07(D); 3745-20-06(F); 60 CFR 61.154(j); and PTI P0115400)

(6) The permittee shall notify the Canton City Health Department, Air Pollution Control Division of any load of asbestos-containing waste 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 ("WSR"), if available, or when waste is not shipped with a WSR, provide available information concerning vehicle identification, source of the load, a description of the load, nature of discrepancy, and the location of the disposal. If possible, non-conforming loads of suspect friable material shall be detained, or the location of disposal protected from damage, until the Canton City Health Department, Air Pollution Control Division is informed and provided the opportunity to inspect.

(Authority for term: OAC rules 3745-77-07(C)(1); 3745-20-05(E)(2)(iii); 40 CFR 61.154(e); and PTI P0115400)

(7) The permittee shall submit an annual report by April 15th of each year, covering the previous calendar year, of the amount in tons of waste material accepted for disposal in that calendar year.

(Authority for term: OAC rules 3745-77-07(C)(1) and PTI P0115400)

(8) Reporting Requirements for Landfill Gas Operations:

a. The permittee shall submit any and all reports in accordance with the Standards of Performance for Municipal Solid Waste Landfills, 40 CFR 60.757, except as indicated in this and the following term and condition:

The reports shall be submitted to the:

Canton City Health Department, Air Pollution Control Division

420 Market Avenue North, Canton, OH 44702-1544

b. Each owner or operator subject to the requirements of 40 CFR part 60, subpart WWW shall submit an initial design capacity report to the Canton City Health Department, Air Pollution Control Division 90 days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction on or after May 12, 1996. The initial design capacity report shall contain the following information:

i. A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the permit issued by the State, local, or tribal agency responsible for regulating the landfill.

ii. The maximum design capacity of the landfill. Where the maximum design capacity is specified in the permit issued by the State, local, or tribal agency responsible for regulating the landfill, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity shall be calculated using good engineering practices. The calculations shall be provided, along with such parameters as part of the report. The State, tribal, local agency or Canton City Health Department, Air Pollution Control Division may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.

c. This facility has fulfilled the requirement to submit the initial collection and control system design plan. Therefore, the permittee is not subject to submitting the collection and control system design plan in 40 CFR 60.752(b)(2)(i) and in 40 CFR 60.757(c) except that this facility shall submit a report certifying that the collection and control system either conforms with the specifications for active collection system in 40 CFR 60.759 or include a demonstration to the Canton City Health Department, Air Pollution Control Division's satisfaction of the sufficiency of the alternative provisions to 40 CFR 60.759.

d. Each owner or operator of a controlled landfill shall submit a closure report to the Canton City Health Department, Air Pollution Control Division within 30 days of waste acceptance cessation. The Canton City Health Department, Air Pollution Control Division may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the Canton City Health Department, Air Pollution Control Division, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4).

e. Each owner or operator of a controlled landfill shall submit an equipment removal report to the Canton City Health Department, Air Pollution Control Division 30 days prior to removal or cessation of operation of the control equipment.

i. The equipment removal report shall contain all of the following items:

(a) a copy of the closure report submitted in accordance with 40 CFR 60.757(d);

(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.

ii. The Canton City Health Department, Air Pollution Control Division may request such 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.

f. By January 31st and July 31st of each year, each owner or operator of a landfill seeking to comply with 40 CFR 60.752(b)(2) using an active collection system designed in accordance with 40 CFR 60.752(b)(2)(ii) shall submit to the Canton City Health Department, Air Pollution Control Division semi-annual reports, in accordance with Part A Standard Terms and Conditions, of the recorded information in term e)(8)f.i. through vi. Below and any reportable exceedances for enclosed combustion devices and flares as described in term d)(9).

i. Value and length of time for exceedance of applicable parameters monitored under 40 CFR 60.756(a), (b), (c), and (d).

ii. Description and duration of all period when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under 40 CFR 60.756.

iii. 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.

iv. All periods when the collection system was not operating in excess of 5 days.

v. The location of each exceedance of the 500 parts per million methane concentration as provided in 40 CFR 60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.

vi. The date of installation and the location of each well or collection system expansion added pursuant to paragraphs (a)(3) and (5), and (c)(4) of 40 CFR 60.755.

g. The permittee shall submit the following information with the initial performance test report required pursuant to 40 CFR 60.8, if not already completed:

i. a diagram of the collection system showing collection system positioning, including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;

ii. the data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gases extraction devices and the gas mover equipment sizing are based;

iii. the documentation of the presence of asbestos-containing waste material or non-degradable material for each area from which collection wells have been excluded based on the presence of asbestos-containing waste material or non-degradable material;

iv. the sum of the gas generation flow rate for all areas from which collection wells have been excluded based on non-productivity and the calculations of gas generation flow rate for each excluded area;

v. the provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and

vi. the provisions for the control of off-site migration.

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.757; and PTI P0115400)

(9) By April 15th of each year, the permittee shall submit an annual report covering the previous calendar year detailing the following:

a. the amount of landfill gas produced by the landfill, scf;

b. the amount of landfill gas input to the open flare and/or the enclosed combustor, in scf;

c. the number of hours that the open flare and/or the enclosed combustor were operated; and

d. the amount of landfill gas, in scf, input to the treatment system that processes the gas for subsequent sale or use.

These reporting requirements may be satisfied by including and identifying this information in the annual Fee Emissions Report.

(Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0115400)

(10) By January 31st of each year, the permittee shall submit an annual report that identifies any of the following occurrences relating to inspections of landfill activities during the previous year:

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.

(Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0115400)

(11) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxics Policy"), through the predicted 1-hour maximum concentration (see terms g)(1) – (2)). The report shall include:

a. The original model input;

b. The updated model input;

c. The reason for the change(s) to the input parameter(s); and

d. A summary of the results of the updated modeling, including the input changes; and

e. A statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

(Authority for term: OAC rule 3745-77-07(C)(1); ORC 3704.03(F)(4)(d); and PTI P0115400)

f) Testing Requirements

(1) Except as provided in 40 CFR 60.752(b)(2)(i)(B), the specified methods in paragraphs (1)a. through (1)f. of this section shall be used to determine whether the gas collection system is in compliance with 40 CFR 60.752 (b)(2)(ii).

a. For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with 40 CFR 60.752(b)(2)(ii)(A)(1), one of the following equations shall be used. The k and L_o kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42) or other site specific values demonstrated to be appropriate and approved by the Director and Canton City Health Department, Air Pollution Control Division. If k has been determined as specified in 40 CFR 60.754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

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

$$Q_m = 2L_o * R * \left[\left(e^{-kc}\right) - \left(e^{-kt}\right)\right]$$

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, $year^{-1}$;

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 = O and e^{-kc} = 1).

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

$$Q_m = \sum_{i=1}^{i=n} 2 * k * L_o * M_i * \left(e^{-kt} * i\right)$$

Where:

M_i = mass of solid waste in the i-th section, megagrams; and

t_i = age of the i-th section, years.

iii. If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in paragraphs f)(1)a.i and a.ii. of this section. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in paragraphs f)(1)a.i. or a.ii. or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

b. For the purposes of determining sufficient density of gas collectors for compliance with 40 CFR 60.752(b)(2)(ii)(A)(2), the owner or operator shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Director and Canton City Health Department, Air Pollution Control Division, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

c. For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR 60.752(b)(2)(ii)(A)(3), the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under 40 CFR 60.753(b). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Director and Canton City Health Department, Air Pollution Control Division for approval.

d. Owners and operators are not required to expand the system as required in paragraph f)(1)c. during the first 180 days after gas collection system startup.

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

f. An owner or operator seeking to demonstrate compliance with 40 CFR 60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in 40 CFR 60.759 shall provide information satisfactory to the Canton City Health Department, Air Pollution Control Division as specified in 40 CFR 60.752(b)(2)(i)(C) demonstrating that off-site migration is being controlled.

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.755(a); and PTI P0115400)

(2) The following procedures shall be used for compliance with the surface methane operational standard as provided in 40 CFR 60.753(d).

a. After installation of the collection system, the owner or operator shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in term f)(3).

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 in 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.

d. Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in terms f)(2)d.i. through v. shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of 40 CFR 60.753(d).

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 re-monitored within 10 calendar days of detecting the exceedance.

iii. If the re-monitoring 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 re-monitoring shows a third exceedance for the same location, the action specified in term f)(2)d.v. shall be taken, and no further monitoring of that location is required until the action specified in term f)(2)d.v. has been taken.

iv. Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in term f)(2)d.ii. or d.iii. shall be re-monitored 1 month from the initial exceedance. If the 1-month re-monitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month re-monitoring shows an exceedance, the actions specified in term f)(2)d.iii. or d.v. shall be taken.

v. For any location where monitored methane concentration equals or exceeds 500 parts per million 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. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Canton City Health Department, Air Pollution Control Division for approval.

e. The owner or operator shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.755(c) and (d); and PTI P0115400)

(3) Each owner or operator seeking to comply with the provisions in term f)(2) shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

a. The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of Appendix A in 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 in 40 CFR Part 60, the instrument evaluation procedures of section 4.4 of Method 21 of Appendix A shall be used.

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

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.755(d); and PTI P0115400)

(4) Fugitive landfill emissions resulting from the biological breakdown of organic wastes shall not exceed the values shown in section b)(1) which are based on calculations described below. These calculations represent the highest emission rates which could occur based on landfill gas emission rates predicted by a maximum annual rate of waste material accepted for disposal of 4,605,000 tons, USEPA's Landfill Gas Estimation program (LANDGEM), AP-42 and other emission factors, a capture efficiency of 75% (the AP-42 default value) for the gas collection and control system, an assumption that 25% of the wastes disposed are inert and are not broken down to create landfill gas, and other assumptions contained in the application.

The resulting emissions were predicted:

a. <u>Emissions Limitation:</u>

167.0 tons of NMOC/yr

<u>Applicable Compliance Method:</u>

NMOC: Emissions were predicted by USEPA's LANDGEM model

b. <u>Emissions Limitation:</u>

26,057 tons of CH_4/yr

<u>Applicable Compliance Method:</u>

CH_4: Emissions were predicted by USEPA's LANDGEM model and AP-42, section 2.4

c. <u>Emissions Limitation:</u>

Fugitive emissions of volatile organic compounds (VOC) shall not exceed 65.0 tons of VOC/yr

<u>Applicable Compliance Method:</u>

VOC: Emissions were calculated based on predictions from USEPA's LANDGEM model and AP-42 equations

d. Emissions Limitation:

23.71 tons of HAPs/yr

Applicable Compliance Method:

HAP: Emissions were calculated based on predictions from USEPA's LANDGEM model and AP-42 equations

(Authority for term: OAC rules 3745-77-07(C)(1) and PTI P0115400)

(5) Compliance with the Emissions Limitations and/or Control Requirements specified in section b)(1) of these terms and conditions that are applicable to the landfill material operations listed below shall be determined in accordance with the following methods:

a. Emissions Limitation:

1.64 tons of PE/yr

Applicable Compliance Method:

Compliance shall be demonstrated by employing the emissions factors derived from the equations in AP-42, Compilation of Air Pollution Emission Factors, Chapter 13.2.4 (January, 1995) for all material handling and storage piles.

Maximum potential uncontrolled emission rates for material handling and storage piles were calculated by using worst case calculations contained in the application based upon material handling being performed to support 15,000 tons per day (TPD) waste acceptance rate (Allowable Maximum Daily Waste Receipt).

b. Emissions Limitation:

Visible fugitive particulate emissions from non-asbestos operations shall not exceed 10 percent opacity as a 6-minute average

Applicable Compliance Method:

Compliance with the visible emission limitation identified above shall be determined in accordance with Test Method 9 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, 2002, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

No visible emission observations are specifically required to demonstrate compliance with the visible emission limitation but, if appropriate, may be required pursuant to OAC rule 3745-15-04(A).

c. Emissions Limitation:

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

Applicable Compliance Method:

Compliance with the no visible emissions requirement specified in section b)(1) 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, 2002, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

No visible emission observations are specifically required to demonstrate compliance with the visible emission limitation but, if appropriate, may be required pursuant to OAC rule 3745-15-04(A).

(Authority for term: OAC rules 3745-77-07(C)(1); 3745-20-06(B)(1); and PTI P0115400)

(6) Compliance with the Emissions Limitations and/or Control Requirements specified in section b)(1) of these terms and conditions that are applicable to the landfill gas control devices shall be determined in accordance with the following methods:

a. Emissions Limitation:

0.80 lb of NMOC/hr and 3.50 tons of NMOC/yr

Applicable Compliance Method:

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

$$\frac{5{,}000\ ft^3}{min} * \frac{lb-mol}{385.4\ ft^3} * \frac{86\ lbs}{lb-mol} * \frac{595\ ppmv}{1{,}000{,}000} * \frac{60\ min}{1\ hr} * (1-0.98) = 0.80\ \frac{lbs}{hr}$$

Where:

$\frac{5{,}000\ ft^3}{min} =$ the restricted maximum landfill gas flow rate to the control devices

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

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

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

$(1 - 0.98) =$ the typical manufacturer's destruction efficiency (98%) for the TOU and flare control devices

If required, the permittee shall demonstrate compliance with the hourly emission limitation in accordance with the methods and procedures specified in Methods 1-4 and 18 of 40 CFR Part 60, Appendix A.

The annual emission limitation was established by multiplying the hourly emissions limitation by 8,760 hrs/yr and dividing by 2,000 lbs/ton as shown below. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation will be satisfied.

$$\frac{0.8\ lb}{hr} * \frac{1\ ton}{2{,}000\ lbs} * \frac{8{,}760\ hrs}{yr} = 3.50\ \frac{tons}{yr}\ NMOC$$

The actual annual emissions shall be calculated by multiplying the calculated hourly emission rate by the hours of operation per year and dividing by 2,000 pounds per ton.

b. <u>Emissions Limitation:</u>

0.31 lb of VOC/hr and 1.36 tons of VOC/yr

<u>Applicable Compliance Method:</u>

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

$$\frac{5{,}000\ ft^3}{min} * \frac{lb - mol}{385.4\ ft^3} * \frac{86\ lbs}{lb - mol} * \frac{232\ ppmv}{1{,}000{,}000} * \frac{60\ min}{1\ hr} * (1 - 0.98) = 0.31\ \frac{lbs}{hr}$$

Where:

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

If required, the permittee shall demonstrate compliance with the hourly emission limitation in accordance with the methods and procedures specified in Methods 1-4 and 18 of 40 CFR Part 60, Appendix A.

The annual emission limitation was established by multiplying the hourly emissions limitation by 8,760 hrs/yr and dividing by 2,000 lbs/ton as shown below. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation will be satisfied.

$$\frac{0.31\ lb}{hr} * \frac{1\ ton}{2{,}000\ lbs} * \frac{8{,}760\ hrs}{yr} = 1.36\ \frac{tons}{yr}\ VOC$$

The actual annual emissions shall be calculated by multiplying the calculated hourly emission rate by the hours of operation per year and dividing by 2,000 pounds per ton.

c. Emissions Limitation:

2.66 lbs of PE/PM_{10}/hr and 11.65 tons of PE/PM_{10}/yr

Applicable Compliance Method:

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

$$\frac{5{,}000\ ft^3}{min} * \frac{17\ lbs\ PE/PM_{10}}{1{,}000{,}000 ft^3\ methane} * \frac{0.52\ ppm\ methane}{1\ ppm\ LFG} * \frac{60\ min}{1\ hr} = 2.66 \frac{lbs}{hr}$$

Where:

$\frac{17\ lbs\ PE/PM_{10}}{10^6 ft^3 methane} =$ the mass of PE/PM_{10} per volume of methane per AP-42, Chapter 2.4

$\frac{0.52\ ppm\ methane}{1\ ppm\ LFG} =$ the estimated landfill methane concentration as provided by permittee

If required, the permittee shall demonstrate compliance with the hourly emission limitation in accordance with the methods and procedures specified in Methods 1-5 of 40 CFR Part 60, Appendix A.

The annual emission limitation was established by multiplying the hourly emissions limitation by 8,760 hrs/yr and dividing by 2,000 lbs/ton as shown below. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation will be satisfied.

$$\frac{2.66\ lbs}{hr} * \frac{1\ ton}{2{,}000\ lbs} * \frac{8{,}760\ hrs}{yr} = 11.65\ \frac{tons}{yr}\ PE/PM_{10}$$

The actual annual emissions shall be calculated by multiplying the calculated hourly emission rate by the hours of operation per year and dividing by 2,000 pounds per ton.

d. Emissions Limitation:

58.42 lbs of CO/hr and 235.30 tons of CO/yr

Applicable Compliance Method:

The hourly emission limitation above was based on the restricted maximum landfill gas flow of 5,000 scfm being sent to the control devices and the gas treatment system not operating. This limitation was established by adding together the hourly CO emissions from the flare, the hourly CO emissions from

the TOU, and the hourly emissions from the combustion of PSA tail gas in Zone 1 of the TOU. The following equations represent the restricted maximum potential to emit CO on an hourly basis, where 5,000 scfm is being combusted by the flare, the TOU is not operating and the gas treatment system is not operating.

The hourly emissions from the flare have been determined using the following equation:

$$\frac{5{,}000\ ft^3 LFG}{min} * \frac{526.24\ Btu}{1\ ft^3\ LFG} * \frac{0.37\ lbs}{10^6\ Btu} * \frac{60\ min}{1\ hr} = 58.42 \frac{lbs}{hr}$$

Where:

$\frac{5{,}000\ ft^3\ LFG}{min} =$ the restricted maximum volume of landfill gas combusted by the flare as demonstrated by recordkeeping with the gas treatment system not operating.

$\frac{526.24\ Btu}{1\ ft^3\ LFG} =$ the high heating value utilizing an average methane value of 52% per site data as provided by permittee

$\frac{0.37\ lbs\ CO}{10^6\ Btu} =$ the emission factor for CO for flare operations per AP-42, Chapter 13.5 Industrial Flares [10/91] and as provided by flare manufacturer

The hourly emissions from the TOU have been determined using the following calculation:

$$\frac{0\ ft^3 LFG}{min} * \frac{526.24\ Btu}{1\ ft^3} * \frac{0.15\ lbs}{10^6 Btu} * \frac{60\ min}{1\ hr} = 0\ \frac{lbs}{hr}$$

Where:

$\frac{0\ ft^3\ LFG}{min} =$ the volume of landfill gas combusted by the TOU (including 0 scfm of supplemental landfill gas to fire Zone 1 of the TOU) as demonstrated by recordkeeping

$\frac{0.15\ lbs}{10^6\ Btu} =$ the TOU emission factors for CO per manufacturer's settings based on a destruction efficiency of 98%

The hourly emissions from the combustion of PSA tail gas in Zone 1 of the TOU have been determined using the following calculation:

$$\frac{0\ ft^3\ tail\ gas}{min} * \frac{125.49\ Btu}{1\ ft^3} * \frac{0.15\ lb}{10^6\ Btu} * \frac{60\ min}{1\ hr} = 0\ \frac{lbs}{hr}$$

Where:

$\frac{0\ ft^3\ tail\ gas}{min} =$ the volume of PSA tail gas combusted in Zone 1 of the TOU as demonstrated by recordkeeping

$\frac{125.49\ Btu}{1\ ft^3} =$ the high heating value utilizing an average methane value of 12.40% per manufacturer's information

Therefore, the total hourly emissions have been determined by adding the hourly emissions from the flare, the hourly emissions from the TOU, and the hourly emissions from the combustion of PSA tail gas.

$$58.42\frac{lbs}{hr} + 0\frac{lbs}{hr} + 0\frac{lbs}{hr} \approx 58.42\ total\ \frac{lbs}{hr}\ of\ CO$$

If required, the permittee shall demonstrate compliance with the hourly emission limitation in accordance with the methods and procedures specified in Methods 1-4 and 10 of 40 CFR Part 60, Appendix A.

The annual CO emission limitation in term b)(1)e. is based on the restricted maximum potential to emit to avoid Prevention of Significant Deterioration (PSD) requirements. This scenario was equated to an annual average of 4,325 scfm landfill gas being combusted by the flare and the remaining balance of 675 scfm being combusted by the TOU, and the gas treatment system not operating. The annual emission limitation was established by adding together the annual CO emissions from the flare, the annual CO emissions from the TOU, and the annual CO emissions from the combustion of PSA tail gas in Zone 1 of the TOU.

The long term emissions from the flare have been determined using the following calculation:

$$\frac{4{,}325\ ft^3 LFG}{min} * \frac{526.24\ Btu}{1\ ft^3\ LFG} * \frac{0.37\ lbs}{10^6\ Btu} * \frac{60\ min}{1\ hr} * \frac{8{,}760\ hrs}{1\ yr} * \frac{1\ ton}{2{,}000\ lbs} = 221.30\frac{tons}{yr}$$

Where:

$\frac{4{,}325\ ft^3\ LFG}{min} =$ the restricted maximum annual average volume of landfill gas combusted by the flare as demonstrated by recordkeeping with the gas treatment system not operating

The long term emissions from the TOU have been determined using the following calculation:

$$\frac{675\ ft^3 LFG}{min} * \frac{526.24\ Btu}{1\ ft^3} * \frac{0.15\ lbs}{10^6 Btu} * \frac{60\ min}{1\ hr} * \frac{8{,}760\ hrs}{1\ yr} * \frac{1\ ton}{2{,}000\ lbs} = 14.00\ \frac{tons}{yr}$$

Where:

$\frac{675\ ft^3\ LFG}{min} =$ the volume of landfill gas combusted by the TOU (including 0 scfm of supplemental landfill gas to fire Zone 1 of the TOU) as demonstrated by recordkeeping

The long term emissions from the combustion of PSA tail gas in Zone 1 of the TOU have been determined using the following calculation:

$$\frac{0\ ft^3\ tail\ gas}{min} * \frac{125.49\ Btu}{1\ ft^3} * \frac{0.15\ lb}{10^6\ Btu} * \frac{60\ min}{1\ hr} * \frac{8{,}760\ hrs}{1\ yr} * \frac{1\ ton}{2{,}000\ lbs} = 0\ \frac{tons}{yr}$$

Where:

$\frac{0\ ft^3\ tail\ gas}{min} =$ the volume of PSA tail gas combusted in Zone 1 of the TOU as demonstrated by recordkeeping with the gas treatment system not operating

The total annual emissions were established by adding together the annual CO emissions from the flare, the annual CO emissions from the TOU, and the annual CO emissions from the combustion of PSA tail gas.

$$221.30\frac{tons}{yr} + 14.00\frac{tons}{yr} + 0\frac{tons}{yr} \approx 235.30\ total\ \frac{tons}{yr}\ CO$$

The actual annual emissions shall be calculated by multiplying the sum of the calculated hourly emission rate from the flare, the TOU, and the PSA tail gas by the hours of operation per year and dividing by 2,000 pounds per ton.

e. Emissions Limitation:

10.74 lbs of NO_x/hr and 46.30 tons of NO_x/yr

Applicable Compliance Method:

The hourly emission limitation above was based on the restricted maximum landfill gas flow of 5,000 scfm being sent to the control devices and the gas treatment system not operating. This limitation was established by adding together the hourly NO_x emissions from the flare, the hourly NO_x emissions from the TOU, and the hourly NO_x emissions from the combustion of PSA tail gas in Zone 1 of the TOU. The following equations represent the restricted maximum potential to emit NO_x on an hourly basis, where 5,000 scfm is being combusted by the flare, the TOU is not operating, and the gas treatment system is not operating.

The hourly emissions from the flare have been determined using the following equation:

$$\frac{5{,}000\ ft^3 LFG}{min} * \frac{526.24\ Btu}{1\ ft^3\ LFG} * \frac{0.068\ lbs}{10^6\ Btu} * \frac{60\ min}{1\ hr} = 10.74\frac{lbs}{hr}$$

Where:

$\frac{5{,}000\ ft^3\ LFG}{min} =$ the restricted maximum volume of landfill gas combusted by the flare as demonstrated by recordkeeping with the gas treatment system not operating

$\frac{0.068\ lbs\ NO_x}{10^6\ Btu} =$ the emission factor for NO_x for flare operations per AP-42, Chapter 13.5 Industrial Flares [10/91] and as

provided by the flare manufacturer

The hourly emissions from the TOU have been determined using the following calculation:

$$\frac{0\ ft^3 LFG}{min} * \frac{526.24\ Btu}{1\ ft^3\ LFG} * \frac{0.06\ lbs}{10^6\ Btu} * \frac{60\ min}{1\ hr} = 0\ \frac{lbs}{hr}$$

Where:

$\frac{0\ ft^3\ LFG}{min} =$ the volume of landfill gas combusted by the TOU (including 0 scfm of supplemental landfill gas to fire Zone 1 of the TOU) as demonstrated by recordkeeping

$\frac{0.06\ lbs}{10^6\ Btu} =$ the TOU emission factors for NO_x per manufacturer's settings based on a destruction efficiency of 98%

The hourly emissions from the combustion of PSA tail gas in Zone 1 of the TOU have been determined using the following calculation:

$$\frac{0\ ft^3\ tail\ gas}{min} * \frac{125.49\ Btu}{1\ ft^3} * \frac{0.06\ lb}{10^6\ Btu} * \frac{60\ min}{1\ hr} = 0\ \frac{lbs}{hr}$$

Where:

$\frac{0\ ft^3\ tail\ gas}{min} =$ the volume of PSA tail gas combusted in Zone 1 of the TOU as demonstrated by recordkeeping

Therefore, the total hourly emissions have been determined by adding the hourly emissions from the flare, the hourly emissions from the TOU, and the hourly emissions from the combustion of PSA tail gas.

$$10.74\ \frac{lbs}{hr} + 0\ \frac{lbs}{hr} + 0\ \frac{lbs}{hr} = 10.74\ total\ \frac{lbs}{hr}\ of\ NO_x$$

If required, the permittee shall demonstrate compliance with the hourly emission limitation in accordance with the methods and procedures specified in Methods 1-4 and 7 of 40 CFR Part 60, Appendix A.

The annual NO_x emission limitation in term b)(1)e. is based on the restricted maximum potential to emit to avoid PSD requirements. This scenario was equated to an annual average of 4,325 scfm landfill gas being combusted by the flare and the remaining balance of 675 scfm being combusted by the TOU, and the gas treatment system not operating. The annual emission limitation was established by adding together the annual NO_x emissions from the flare, the annual NO_x emissions from the TOU, and the annual NO_x emissions from the combustion of PSA tail gas in Zone 1 of the TOU.

The long term emissions from the flare have been determined using the following calculation:

$$\frac{4{,}325\ ft^3 LFG}{min} * \frac{526.24\ Btu}{1\ ft^3\ LFG} * \frac{0.068\ lbs}{10^6\ Btu} * \frac{60\ min}{1\ hr} * \frac{8{,}760\ hrs}{1\ yr} * \frac{1\ ton}{2{,}000\ lbs} = 40.68\ \frac{tons}{yr}$$

Where:

$\frac{4{,}325\ ft^3\ LFG}{min} =$ the restricted maximum annual average volume of landfill gas combusted by the flare as demonstrated by recordkeeping with the gas treatment system not operating

The long term emissions from the TOU have been determined using the following calculation:

$$\frac{675\ ft^3 LFG}{min} * \frac{526.24\ Btu}{1\ ft^3} * \frac{0.06\ lbs}{10^6 Btu} * \frac{60\ min}{1\ hr} * \frac{8{,}760\ hrs}{1\ yr} * \frac{1\ ton}{2{,}000\ lbs} = 5.60\ \frac{tons}{yr}$$

Where:

$\frac{675\ ft^3\ LFG}{min} =$ the volume of landfill gas combusted by the TOU (including 0 scfm of supplemental landfill gas to fire Zone 1 of the TOU) as demonstrated by recordkeeping

The long term emissions from the combustion of PSA tail gas in Zone 1 of the TOU have been determined using the following calculation:

$$\frac{0\ ft^3\ tail\ gas}{min} * \frac{125.49\ Btu}{1\ ft^3} * \frac{0.06\ lb}{10^6\ Btu} * \frac{60\ min}{1\ hr} * \frac{8{,}760\ hrs}{1\ yr} * \frac{1\ ton}{2{,}000\ lbs} = 0\ \frac{tons}{yr}$$

Where:

$\frac{0\ ft^3\ tail\ gas}{min} =$ the volume of PSA tail gas combusted in Zone 1 of the TOU as demonstrated by recordkeeping with the gas treatment system not operating

The total annual emissions were established by adding together the annual NO_x emissions from the flare, the annual NO_x emissions from the TOU, and the annual NO_x emissions from the combustion of PSA tail.

$$40.68\frac{tons}{yr} + 5.60\frac{tons}{yr} + 0\frac{tons}{yr} \approx 46.30\ total\ \frac{tons}{yr} NO_x$$

The actual annual emissions shall be calculated by multiplying the sum of the calculated hourly emission rate from the flare, the TOU, and the PSA tail gas by the hours of operation per year and dividing by 2,000 pounds per ton.

f. <u>Emissions Limitation:</u>

2.34 lbs of SO_2/ hr and 10.25 tons of SO_2/yr

Applicable Compliance Method:

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

$$\frac{5{,}000\ ft^3}{min} * \frac{lb-mol}{385.4\ ft^3} * \frac{64\ lbs}{lb-mol} * \frac{46.9\ ppmv}{1{,}000{,}000} * \frac{60\ min}{1\ hr} = 2.34\frac{lbs}{hr}$$

Where:

$\frac{64\ lbs}{lb-mol} =$ the molecular weight of sulfur dioxide

$\frac{46.9\ ppmv}{1{,}000{,}000} =$ assumed reduced sulfur compound concentration in the exhaust gas for both control devices (represents worst-case emissions for SO_2) per AP-42, Chapter 2.4

If required, the permittee shall demonstrate compliance with the hourly emission limitation in accordance with the methods and procedures specified in Methods 1-4 and 6 of 40 CFR Part 60, Appendix A.

The annual emission limitation was established by multiplying the hourly emissions limitation by 8,760 hrs/yr and dividing by 2,000 lbs/ton as shown below. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation will be satisfied.

$$\frac{2.34\ lbs}{hr} * \frac{1\ ton}{2{,}000\ lbs} * \frac{8{,}760\ hrs}{yr} = 10.25\ \frac{tons}{yr} SO_2$$

The actual annual emissions shall be calculated by multiplying the calculated hourly emission rate by the hours of operation per year and dividing by 2,000 pounds per ton.

g. Emissions Limitation:

1.20 lbs of HCL/hr and 5.30 tons of HCl/yr

Applicable Compliance Method:

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

$$\frac{5{,}000\ ft^3\ LFG}{min} * \frac{lb-mol}{385.4\ ft^3} * \frac{36.5\ lb}{lb-mol} * \frac{42.0\ ppmv}{1{,}000{,}000} * \frac{60\ min}{hr} = 1.20\ \frac{lbs}{hr}$$

Where:

$\frac{36.5\ lbs}{lb-mol} =$ the molecular weight of hydrogen chloride

$\frac{42.0\ ppmv}{1{,}000{,}000} =$ the default HCl concentration in the exhaust gas for both control devices (represents worst-case emissions for HCl) per AP-42, Chapter 2.4

If required, the permittee shall demonstrate compliance with this emissions limitation in accordance with the methods and procedures specified in Methods 1-4 and 26 or 26A of 40 CFR Part 60, Appendix A.

The annual emission limitation was established by multiplying the hourly emissions limitation by 8,760 hrs/yr and dividing by 2,000 lbs/ton as shown below. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation will be satisfied.

$$\frac{1.20\ lbs}{hr} * \frac{8{,}760\ hrs}{1\ yr} * \frac{1\ ton}{2{,}000\ lbs} = 5.30\ \frac{tons}{yr}\ HCl$$

The actual annual emissions shall be calculated by multiplying the calculated hourly emission rate by the hours of operation per year and dividing by 2,000 pounds per ton.

h. Emissions Limitation:

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

Applicable Compliance Method:

Compliance shall be demonstrated through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22, and procedures specified in 40 CFR Part 60.18.

No Method 22 tests are specifically required to demonstrate compliance with the visible emissions limitation but, if appropriate, may be required pursuant to OAC rule 3745-15-04(A).

(Authority for term: OAC rules 3745-77-07(C)(1) and PTI P0115400)

(7) The permittee shall conduct, or have conducted emission testing to demonstrate that the current control device can operate in conformance with the requirements specified in 40 CFR part 60.18.

However, if subsequently requested or if the permittee installs an additional open flare(s) and/or an enclosed combustor(s) to control the additional predicted landfill gas volume, the permittee shall conduct or have conducted, additional performance test(s) to demonstrate that the flare(s) and/or enclosed combustor(s) can operate in conformance with the requirements specified below:

a. The emission testing shall be conducted within 6 months after issuance of the permit (following the effective date for the Title V permit) and within 6 months prior to the permit expiration.

i. Portions of the results of emission testing performed on 03/05/2015 can be utilized as applicable to satisfy these stack test requirements, provided such testing is done no later than 6 months after issuance of this permit.

b. The testing for any new control equipment installation shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit.

c. The emission testing shall be conducted to demonstrate compliance with the limitations contained in b)(1) for the control devices. For an open flare, a performance test shall be conducted to demonstrate compliance with the requirements specified in 40 CFR 60.18. The net heating value of the gas being combusted in the flare and the actual exit velocity of the flare shall be determined in accordance with the procedures and methods specified in 40 CFR Part 60.18. The visible emission evaluations shall be conducted in accordance with the procedures specified in section f)(8)h.

d. For the dual-zone TOU, a performance test required in 60.752(b)(2)(iii)(B), Method 25C or Method 18 of 40 CFR 60 Appendix A shall be used to determine compliance with 98 weight-percent efficiency or the 20 ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Canton City Health Department, Air Pollution Control Division as provided by 60.752(b)(2)(i)(B). If using Method 18 of Appendix A of 40 CFR Part 60, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency:

$$Control\ Efficiency = (NMOC_{in} - NMOC_{out})/(NMOC_{in})$$

Where:

$NMOC_{in}$ = mass of NMOC entering control device

$NMOC_{out}$ = mass of NMOC exiting control device

e. The permittee shall perform two separate performance tests on the dual-zone TOU.

i. The first test shall be when Zone A of the TOU is accepting tail gas from the PSA and sufficient landfill gas to combust the tail gas. This shall represent a low flow scenario when Zone A is the only active zone.

ii. The second test shall be in Zone B of the TOU, when the TOU is accepting only landfill gas and no tail gas. Zone B will become active once additional gas is added past the maximum design capacity of Zone A. At this time, the flow to Zone A will be dropped to the minimum required value necessary for tail gas destruction, and the remainder of the flow will be diverted to Zone B.

iii. Temperatures from each separate zone for each test shall be recorded to demonstrate that the TOU is achieving combustion temperatures in each zone that are at or above the minimum temperatures required by the 40 CFR Part 60.

f. During the emissions testing, the emissions unit shall be operated under operational conditions approved in advance by the Canton City Health Department, Air Pollution Control Division. Operational conditions that may need to be approved include, but are not limited to, the production rate, the type of material processed, material make-up (solvent content, etc.), or control equipment operational limitations (burner temperature, precipitator voltage, etc.). In general, testing shall be done under "worst case" conditions expected during the life of the permit. As part of the information provided in the "Intent to Test" notification form described below, the permittee shall provide a description of the emissions unit operational conditions they will meet during the emissions testing and describe why they believe "worst case" operating conditions will be met. Prior to conducting the test(s), the permittee shall confirm with the Canton City Health Department, Air Pollution Control Division that the proposed operating conditions constitute "worst case." Failure to test under the approved conditions may result in Ohio EPA not accepting the test results as a demonstration of compliance.

g. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an Intent to Test (ITT) Notification to the Canton City Health Department, Air Pollution Control Division. The ITT Notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the tests and the persons who will be conducting the tests. Failure to submit such notification for review and approval prior to the test may result in the refusal to accept the ITT.

h. Personnel from the Canton City Health Department, Air Pollution Control Division shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

i. A comprehensive written report on the results of the emissions test shall be signed by the person or persons responsible for the test and submitted to the Canton City Health Department, Air Pollution Control Division within 30 days following the completion of the tests.

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.754(d); and PTI P0115400)

(8) After the installation of a collection and control system in compliance with 40 CFR 60.755, the owner or permittee shall calculate the NMOC emission rate for the purposes of determining when the system can be removed as provided in 40 CFR 60.752(b)(2)(v), using the following equation:

$$M_{NMOC} = 0.00189 * Q_{LFG} * C_{NMOC}$$

Where:

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

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

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

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

b. The average NMOC concentration, C_{NMOC}, 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 of Appendix A of 40 CFR Part 60. 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 (AP-42). 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 C_{NMOC} as carbon to C_{NMOC} as hexane.

c. The permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Canton City Health Department, Air Pollution Control Division.

(Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.754(b); and PTI P0115400)

g) Miscellaneous Requirements

(1) The Permit-to-Install PTI 15-01601 for this emissions unit P902 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the PTI 15-01601 application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the PTI application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC).

The following table summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant:	Hydrogen Chloride
Threshold Limit Value (TLV):	2.99 mg/m^3
Maximum Hourly Emission Rate:	3.46 lbs/hr
Predicted 1-Hour Maximum Ground-Level Concentration:	0.44 µg/m^3
MAGLC:	71.2 µg/m^3

Physical changes to or changes in the method of operation of the emission unit after its install or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. Changes in the composition of the material used or the use of new materials, that would result in the emission of a compound with a lower TLV, as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists: (ACGIH), 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 pollutant with a listed TLV that was proposed in the application and modeled; and

c. Physical changes to the emission unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, changes in emission unit location, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing PTI will not be required, even if the toxic air contaminant emission are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final PTI prior to the change.

(Authority for term: OAC 3704.03(F)(3)(c) and (F)(4); OAC rule 3745-114-01; and PTI P0115400)

(2) The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emission unit will still satisfy the "Air Toxic Policy".

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, location of the emission unit, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

(Authority for term: ORC 3704.03(F)(3)(c) and (F)(4); OAC rule 3745-114-01; and PTI P0115400)