Ohio Environmental Protection Agency
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

12/22/2011

Certified Mail

Facility ID: 1667010007
Permit Number: P0108896
County: Portage

Mr. Allen Bradburn
BFI of Ohio / Willowcreek Landfill
5092 Aber Road
Williamsburg, OH 45176

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

Dear Permit Holder:

Enclosed is the Ohio EPA Preliminary Proposed Title V permit that was issued in draft form on 11/17/2011. 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 "Issued Air Pollution Control Permits" link. 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

Akron Regional Air Quality Management District
146 South High Street, Room 904
Akron, OH 44308

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 W. Ahern

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

Cc: Akron Regional Air Quality Management District

Response to Comments

Facility ID:	1667010007
Facility Name:	BFI of Ohio / Willowcreek Landfill
Facility Description:	Closed Landfill
Facility Address:	1043 State Route 225 Atwater, OH 44201 Portage County
Permit:	P0108896, 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 Record Courier on 11/20/2011. The comment period ended on 12/20/2011.	
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

Ohio | Environmental Protection Agency

PRELIMINARY PROPOSED

Division of Air Pollution Control
Title V Permit
for
BFI of Ohio / Willowcreek Landfill

Facility ID:	1667010007
Permit Number:	P0108896
Permit Type:	Renewal
Issued:	12/22/2011
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
BFI of Ohio / Willowcreek Landfill

Table of Contents

Authorization 1
A. Standard Terms and Conditions 2
1. Federally Enforceable Standard Terms and Conditions 3
2. Monitoring and Related Record Keeping and Reporting Requirements 3
3. Scheduled Maintenance 6
4. Risk Management Plans 6
5. Title IV Provisions 7
6. Severability Clause 7
7. General Requirements 7
8. Fees 8
9. Marketable Permit Programs 8
10. Reasonably Anticipated Operating Scenarios 8
11. Reopening for Cause 9
12. Federal and State Enforceability 9
13. Compliance Requirements 9
14. Permit Shield 11
15. Operational Flexibility 11
16. Emergencies 11
17. Off-Permit Changes 11
18. Compliance Method Requirements 12
19. Insignificant Activities or Emissions Levels 12
20. Permit to Install Requirement 12
21. Air Pollution Nuisance 13
22. Permanent Shutdown of an Emissions Unit 13
23. Title VI Provisions 13
24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only 14
25. Records Retention Requirements Under State Law Only 14
26. Inspections and Information Requests 14
27. Scheduled Maintenance/Malfunction Reporting 14
28. Permit Transfers 15

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

B. Facility-Wide Terms and Conditions..... 16

C. Emissions Unit Terms and Conditions 18

1. P901, Closed MSW Landfill..... 19

Authorization

Facility ID: 1667010007
Facility Description:
Application Number(s): A0042915, A0042977
Permit Number: P0108896
Permit Description: Title V Renewal for a Closed MSW Landfill with an Enclosed Flare
Permit Type: Renewal
Issue Date: 12/22/2011
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Superseded Permit Number: P0101968

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

BFI of Ohio / Willowcreek Landfill
1043 State Route 225
Atwater, OH 44201

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

Akron Regional Air Quality Management District
146 South High Street, Room 904
Akron, OH 44308
(330)375-2480

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 Akron Regional Air Quality Management District. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months (540 days) and no later than 6 months (180 days) prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

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

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

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

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

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

(Authority for term: ORC 3704.036(A))

2. Monitoring and Related Record Keeping and Reporting Requirements

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

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

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

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

(4) The analytical techniques or methods used.

(5) The results of such analyses.

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

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

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

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

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

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

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

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

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

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

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

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

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or

local air agency. Except as provided below, the written reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

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

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

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

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

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

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

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

adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

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

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

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

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

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

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

(5) Reports of any required monitoring and/or record keeping information shall be submitted to Akron Regional Air Quality Management District.

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

3. Scheduled Maintenance

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

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

4. Risk Management Plans

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

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

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

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

5. Title IV Provisions

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

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

6. Severability Clause

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

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

7. General Requirements

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

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

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

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

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

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

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

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

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

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

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

8. Fees

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

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

9. Marketable Permit Programs

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

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

10. Reasonably Anticipated Operating Scenarios

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

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

11. Reopening for Cause

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

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

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

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

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

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

12. Federal and State Enforceability

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

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

13. Compliance Requirements

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

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

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

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

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

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

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

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

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

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

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

(2) Compliance certifications shall include the following:

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

b. The permittee's current compliance status.

c. Whether compliance was continuous or intermittent.

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

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

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

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

14. Permit Shield

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

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

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

15. Operational Flexibility

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

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

16. Emergencies

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

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

17. Off-Permit Changes

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

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

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

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

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

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

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

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

18. Compliance Method Requirements

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

(This term is provided for informational purposes only.)

19. Insignificant Activities or Emissions Levels

Each IEU that has one or more applicable requirements shall comply with those applicable requirements.

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

20. Permit to Install Requirement

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

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

21. Air Pollution Nuisance

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

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

22. Permanent Shutdown of an Emissions Unit

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

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

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

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

23. Title VI Provisions

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

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

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

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

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

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

The permittee shall submit required reports in the following manner:

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

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

25. Records Retention Requirements Under State Law Only

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

26. Inspections and Information Requests

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

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

27. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air

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

28. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

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

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

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

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

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

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

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

B. Facility-Wide Terms and Conditions

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

   a) None.

2. 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 requirements contained in a permit-to-install or in the SIP approved versions of OAC Chapters 3745-17, 3745-18, and 3745-21:

   a) F003 – roadways and parking areas (PTI 16-01103).

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

3. Thisfacility is subject to the requirements of 40 CFR Part 63, Subpart AAAA – National Emission Standards for Hazardous Air Pollutants for Municipal Solid Waste Landfills.

   The complete MACT requirements, including the MACT General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

   (Authority for term: 40 CFR Part 63, Subpart AAAA)

C. Emissions Unit Terms and Conditions

1. P901, Closed MSW Landfill

Operations, Property and/or Equipment Description:

Closed MSW Landfill, Gas Collection, and Control System (Enclosed Flare)

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific 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 16-01155, as issued 9/21/94) (PTI 16-01103, as issued 11/01/95)	**Fugitive Landfill Emissions:** Particulate emissions (PE) shall not exceed 0.059 ton per acre of cell per year, and 2.0 tons per year. **Controlled Emissions From Enclosed Flare:** Non-methane organic compound (NMOC) emissions shall not exceed 2.18 pounds per hour. Nitrogen oxides (NO_x) emissions shall not exceed 5.92 pounds per hour. Sulfur dioxide (SO_2) emissions shall not exceed 3.24 pounds per hour. Carbon monoxide (CO) emissions shall not exceed 21.7 pounds per hour. Hydrochloric acid (HCl) emissions shall not exceed 2.26 pounds per hour. Benzene emissions shall not exceed 0.01 pound per hour. Vinyl chloride emissions shall not exceed 0.03 pound per hour.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(D)	HCl emissions shall not exceed 9.9 tons per year, as a rolling, 12-month summation. CO emissions shall not exceed 95.0 tons per year, as a rolling, 12-month summation. See b)(2)a below.
c.	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
d.	OAC rule 3745-17-10(B)(1)	PE shall not exceed 0.020 pound per million Btu of actual heat input.
e.	OAC rules 3745-76-(01) thru (15) 40 CFR Part 60 Subpart Cc	The emission limitation based on this rule is equivalent to the limit established pursuant to 40 CFR Part 60, Subpart WWW.
f.	40 CFR Part 60, Subpart WWW	Reduce NMOCs 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% oxygen. Methane concentration from the collection system shall be less than 500 parts per million above background at the surface of the landfill. See sections b)(2)b through b)(2)k below.
g.	40 CFR Part 63, Subpart AAAA	The requirements of this rule include the requirements of 40 CFR Part 60, Subpart WWW, 40 CFR Part 60, Subpart Cc, and 40 CFR 63.6(e)(3).
h.	40 CFR 63.1-15	Table 1 to Subpart AAAA of 40 CFR Part 63 – Applicability of General Provisions to Subpart AAAA shows which parts of the General Provisions in 40 CFR 63.1 – 15 apply.

(2) Additional Terms and Conditions

a. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, HCl and CO summations of the emissions, upon issuance of this permit.

b. The permittee shall operate the active collection and control system to capture the gas generated within the landfill and route all the collected gas to an enclosed combustion device, which shall either reduce the NMOC by 98 percent by weight or reduce the outlet NMOC concentration to less than 20 ppm by volume, on a dry basis as hexane at 3% oxygen. The collection and control system shall be operated to comply with 40 CFR 60, Subpart WWW in accordance with the provisions of 40 CFR sections 60.752, 60.753, 60.755, and 60.756, which are reflected in this permit.

c. Thelandfill gas collection system shall satisfy the following requirements, as specified in 40 CFR 60.752(b)(2)(ii)(A):

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

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

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

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

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

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

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

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

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

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

f. The permittee shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas

producing areas using the following procedures unless alternative procedures have been approved by the Director:

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

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

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

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

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

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

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

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

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

$$Q_i = 2k\, L_0\, M_i\, (e^{-kti})\, C_{NMOC}\, (3.6x10^{-9})$$

where:

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

k = methane generation rate constant, in year $^{-1}$

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

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

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

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

3.6×10^{-9} = conversion factor

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

k** = 0.05 per year

L_O = 170 cubic meters per megagram

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

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

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

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

loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration.

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

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

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

k. 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.

c) Operational Restrictions

(1) The permittee shall operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for 5 years or more if active, or for 2 years or more if closed or at final grade, and as required in 40 CFR 60.752, 60.753, and this permit. The collection and control system shall meet the specifications for an active collection system as required in 40 CFR 60.759, included in this permit.

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

(2) The permittee shall operate the collection system with negative pressure at each wellhead except under the following conditions:

a. a fire or increased well temperature (the permittee shall record all instances when positive pressure occurs in efforts to avoid a fire);

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

c. decommissioned well (a well may experience a static positive pressure after shutdown to accommodate for declining flows). All design changes shall be approved by the Ohio EPA.

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

(3) The permittee shall operate each interior wellhead in the collection system with a landfill gas temperature less than 55 degrees Celsius and with either a nitrogen level less than 20% or an oxygen level less than 5%. The permittee may establish a higher operating temperature, nitrogen level, or oxygen level at a particular well, if it can be demonstrated with supporting data, that the elevated parameter could not cause fires or significantly inhibit anaerobic decomposition by killing methanogens. The nitrogen or oxygen concentration shall be determined as required in the Testing Section of this permit.

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

(4) The permittee shall operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the permittee shall conduct surface testing on a quarterly basis around the perimeter of the collection area and along a pattern that traverses the landfill at 30-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover.

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

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

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

(5) The permittee shall operate the collection system such that all collected gases are vented to a control system designed and operated in compliance with the requirements in this permit. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour.

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

(6) 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), PTI 16-01155, and 40 CFR 60.753(f))

(7) If monitoring demonstrates that the operational requirements for negative pressure, interior wellhead temperature, wellhead oxygen or nitrogen concentration, and/or surface

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

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

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

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

(9) The permittee shall keep for at least 5 years, up-to-date, readily accessible, on-site records of the design capacity report which showed the landfill capacity to equal or exceed 2.5 million megagram and/or 2.5 million cubic meters, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either hardcopy or electronic formats are acceptable.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 60.758(a))

(10) The total quantity of landfill gas burned in the enclosed flare shall not exceed 3.91 million cubic feet per day.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 16-01155)

(11) If the heat sensing device detects a no flame condition which cannot immediately be restarted, the system shall automatically shut down the flow of landfill gas.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 16-01155)

d) Monitoring and/or Recordkeeping Requirements

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

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(C)(1) and40 CFR 60.758(c))

(3) The permittee shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

(Authority for term: OAC rule 3745-77-07(C)(1) and40 CFR 60.758(d))

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

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

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

(Authority for term: OAC rule 3745-77-07(C)(1)and40 CFR 60.758(d)(2))

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

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

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

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

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

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

If a well exceeds one of the operating parameters as specified in this permit, except as provided under 40 CFR 60.753(b) and (c)***, action shall be initiated to correct the exceedances within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance.

Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative time line for correcting the exceedance may be submitted to the District Office or local air agency for approval.

*** 40 CFR 60.753(b) allows a positive pressure under three exceptions: in the case of a fire or increased well temperatures; with the use of a geomembrane or synthetic cover; and on a decommissioned well. 40 CFR 60.753(c) allows a higher operating value with a demonstration, including supporting data, that the elevated parameters of temperature and nitrogen or oxygen concentrations could not support a fire or significantly inhibit anaerobic decomposition by killing methanogens.

(Authority for term: OAC rule 3745-77-07(C)(1), PTI 16-01155, and 40 CFR 60.756(a))

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

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

b. the background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells;

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

d. any reading of 500 ppm or more above background at any location shall be recorded as a monitored exceedance and the actions specified below shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements listed in Section A.II:

i. The location of each monitored exceedance shall be marked and the location recorded.

ii. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be 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, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. No further monitoring of that location is required until the new well(s) or collection device has been installed.

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

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

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

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

(Authority for term: OAC rule 3745-77-07(C)(1),40 CFR 60.755(c), and 40 CFR 60.756(f))

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

(Authority for term: OAC rule 3745-77-07(C)(1)and 40 CFR 60.755(c)(5))

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

(Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR 60.755(a)(3), and (4))

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

(Authority for term: OAC rule 3745-77-07(C)(1) and40 CFR 60.755(a)(5))

(12) The permittee using an enclosed combustor to demonstrate compliance with the landfill gas control requirements must install, calibrate, maintain and operate, according to the manufacturer's specification, the following equipment:

a. A temperature monitoring device equipped with a continuous recorder, having a minimum accuracy of +/- 1 percent of the temperature being measured expressed in degrees Celsius or +/- 0.5 degrees Celsius, whichever is greater;

b. A device that records flow to or bypass of the combustor. The permittee 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), PTI 16-01155, and40 CFR 60.756(b))

(13) The following shall constitute an exceedance for the enclosed combustor and shall be reported under 40 CFR 60.757(f) and as required in this permit: all 3-hour periods of operation during which the average combustion temperature was more than 28 degrees Celsius below the average combustion temperature during the most recent performance test that demonstrated compliance.

(Authority for term: OAC rule 3745-77-07(C)(1) and40 CFR 60.758(c)(1)(i))

(14) The permittee shall calculate and maintain monthlyrecords of theHCl and COemissions and the rolling 12-month summationemissions of HCl and CO.

(Authority for term: OAC rule 3745-77-07(C)(1) and PTI 16-01155)

(15) The permittee shall maintain daily records of the total volume of landfill gas burned in the enclosed flare.

(Authority for term: OAC rule 3745-77-07(C)(1) and PTI 16-01155)

(16) The permittee shall, upon each visit to this closed facility, and at a minimum of once per month during normal operating conditions, visually inspect the enclosed flare and record whether or not any visible emissions are present and the duration of any visible emissions.

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

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

(Authority for term: OAC rule 3745-15-03(A))

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

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

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

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

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

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

b. description and duration of all periods when the gas stream is diverted from the control device through a bypass line or any indication of periods of bypass of the control device;

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR 63.1955(c) and 63.1980(a), and 40 CFR 60.757(f))

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

a. a copy of the closure report;

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

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

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

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

a. all exceedances of the rolling, 12-month summation emission limitations for CO and HCl; and

b. any exceedance of the daily allowable quantity of landfill gas burned.

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

(Authority for term: OAC rule 3745-77-07(C)(1) and PTI 16-01155)

(5) The permittee shall submit semiannual reports which include an identification of any record showing that visible emissions were present from the enclosed flare. The reports shall be submitted by January 31 and July 30 of each year and shall cover the previous 6 calendar months.

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

(6) Any breakdown or malfunction of the landfill gas collection and control system resulting in the emission of raw landfill gas emissions to the atmosphere shall be reported to the Akron RAQMD within one hour after the occurrence, or as soon as reasonably possible, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions to the atmosphere.

(Authority for term: OAC rule 3745-77-07(C)(1) andPTI 16-01155)

f) Testing Requirements

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

a. Emission Limitations:

PE shall not exceed 0.059 tons per acre of cell per year, and 2.0 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated using Ohio EPA's "Reasonably Available Control Measures For Fugitive Dust Sources (RACM)" emission factor of 0.048 ton of particulate per acre of cell worked (Table 2.1.2-5, 1983).

(Authority for term: OAC rule 3745-77-07(C)(1) andPTI 16-01103)

b. Emission Limitations:

NMOC emission shall not exceed 2.18 pounds per hour.

Reduce NMOCs 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% oxygen.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the NMOC emission rate, as calculated by USEPA's Landfill Emissions Model (LandGEM), by an average capture efficiency of 85%, and a flare destruction efficiency from the results of the latest stack test.

If required, compliance with the hourly limitation shall be demonstrated through the results of stack testing performed in accordance with Methods 1 - 4, and 18or 25C of 40 CFR Part 60, Appendix A.

(Authority for term: OAC rule 3745-77-07(C)(1) andPTI 16-01155)

c. Emission Limitations:

NO_x emissions shall not exceed 5.92 pounds per hour.

Applicable Compliance Method:

If required, compliance with the hourly limitation shall be demonstrated through the results of stack testing performed in accordance with Methods 1 - 4, and 7 of 40 CFR Part 60, Appendix A.

(Authority for term: OAC rule 3745-77-07(C)(1) andPTI 16-01155)

d. Emission Limitations:

SO_2 emissions shall not exceed 3.24 pounds per hour.

Applicable Compliance Method:

If required, compliance with the hourly limitation shall be demonstrated through the results of stack testing performed in accordance with Methods 1 - 4, and 6 of 40 CFR Part 60, Appendix A.

(Authority for term: OAC rule 3745-77-07(C)(1) andPTI 16-01155)

e. Emission Limitations:

CO emissions shall not exceed 21.7 pounds per hour.

CO emissions shall not exceed 95.0 tons per year, as a rolling, 12-month summation.

Applicable Compliance Method:

If required, compliance with the hourly limitation shall be demonstrated through the results of stack testing performed in accordance with Methods 1 - 4, and 10 of 40 CFR Part 60, Appendix A.

Compliance with the rolling 12-month limitation shall be determined in accordance with the record keeping requirements specified in section d)(14).

(Authority for term: OAC rule 3745-77-07(C)(1) andPTI 16-01155)

f. Emission Limitations:

HCl emissions shall not exceed 2.26 pounds per hour.

HCl emissions shall not exceed 9.9 tons per year, as a rolling, 12-month summation.

Applicable Compliance Method:

If required, compliance with the hourly limitation shall be demonstrated through the results of stack testing performed in accordance with Methods 1 - 4, and 26 of 40 CFR Part 60, Appendix A.

Compliance with the rolling 12-month limitation shall be determined in accordance with the record keeping requirements specified in section d)(14).

(Authority for term: OAC rule 3745-77-07(C)(1) andPTI 16-01155)

g. Emission Limitations:

Vinyl chloride emissions shall not exceed 0.03 pound per hour.

Applicable Compliance Method:

If required, compliance with the hourly limitation shall be demonstrated through the results of stack testing performed in accordance with Methods 1 - 4, and 106 of 40 CFR Part 60, Appendix A.

(Authority for term: OAC rule 3745-77-07(C)(1) andPTI 16-01155)

h. Emission Limitations:

Benzene emissions shall not exceed 0.01 pound per hour.

Applicable Compliance Method:

If required, compliance with the hourly limitation shall be demonstrated through the results of stack testing performed in accordance with Methods 1 - 4, and 18 of 40 CFR Part 60, Appendix A.

(Authority for term: OAC rule 3745-77-07(C)(1) andPTI 16-01155)

i. Emission Limitations:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitation shall be demonstrated through the results of visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

(Authority for term: OAC rule 3745-77-07(C)(1) andPTI 16-01155)

j. Emission Limitations:

PE shall not exceed 0.020 pound per million Btu of actual heat input.

Applicable Compliance Method:

If required, compliance with the PE limitation shall be demonstrated through the results of stack testing performed in accordance with Methods 1 - 5 of 40 CFR Part 60, Appendix A.

(Authority for term: OAC rule 3745-77-07(C)(1) andPTI 16-01155)

k. Emission Limitations:

Methane concentration from the collection system shall be less than 500 parts per million above background at the surface of the landfill.

Applicable Compliance Method:

Compliance shall be demonstrated through the results of surface monitoring performed in accordance with the methodology in section d)(4).

(Authority for term: OAC rule 3745-77-07(C)(1) andPTI 16-01155)

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

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

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

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

ii. a data recorder is not required;

iii. only two calibration gases are required, a zero and span, and ambient air may be used as the span;

iv. a calibration error check is not required; and

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

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 60.753(c))

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

MNMOC = 0.00189 (QLFG) CNMOC

where,

MNMOC = mass emission rate of NMOC, megagram per year

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(C)(1) and40 CFR 60.754(b))

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

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

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

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

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

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

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

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

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

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

where,

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

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

R = average annual acceptance rate, megagram per year

k = methane generation rate constant, per year

t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less (if the equipment is installed after closure, t is the age of the landfill at installation), years

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

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

$$Q_m = \sum_{i=1}^{n} 2kL_oM_i \times (e^{-kti})$$

where,

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

k = methane generation rate constant, per year

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

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

t_i = age of the ith section, in years

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

method to determine the maximum gas generation flow rate, if the method has been approved by the Ohio EPA.)

b. For the purposes of determining sufficient density of gas collectors for compliance with a collection system designed to handle the maximum expected landfill gas flow rate, the permittee shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Director, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

(Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR 60.755(a)(1), and (2))

(6) When calculating emissions for PSD purposes, the permittee shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in 40 CFR 51.166 or 40 CFR 52.21, using AP-42 or other approved measurement procedures.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 60.754(c))

g) Miscellaneous Requirements

(1) None.