



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

12/24/2012

Certified Mail

Facility ID: 1318247721
Permit Number: P0095454
County: Cuyahoga

Mr. Allen Bradburn
BFI - Glenwillow Landfill
5092 Aber Road
Williamsburg, OH 45176

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

Dear Permit Holder:

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

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

How to appeal this permit

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

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

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

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

How to get an electronic copy of your permit

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

If you have any questions regarding this permit, please contact the Cleveland Division of Air Quality as indicated on page one of your permit.

Sincerely,



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

Cc: U.S. EPA Region 5 *Via E-Mail Notification*
Cleveland Division of Air Quality



FINAL

**Division of Air Pollution Control
Title V Permit
for
BFI - Glenwillow Landfill**

Facility ID:	1318247721
Permit Number:	P0095454
Permit Type:	Renewal
Issued:	12/24/2012
Effective:	1/14/2013
Expiration:	1/14/2018



Division of Air Pollution Control
Title V Permit
for
BFI - Glenwillow Landfill

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Final Title V Permit
BFI - Glenwillow Landfill
Permit Number: P0095454
Facility ID: 1318247721
Effective Date: 1/14/2013

Authorization

Facility ID: 1318247721
Facility Description:
Application Number(s): A0027020, A0027021
Permit Number: P0095454
Permit Description: Title V renewal permit for BFI Glenwillow landfill controlled with an enclosed flare. Landfill opened in 1950's and closed since 1996.
Permit Type: Renewal
Issue Date: 12/24/2012
Effective Date: 1/14/2013
Expiration Date: 1/14/2018
Superseded Permit Number: P0095453

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

BFI - Glenwillow Landfill
30300 Pettibone Road
Glenwillow, OH 44139

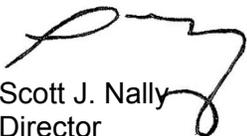
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Cleveland Division of Air Quality
2nd Floor
75 Erieview Plaza
Cleveland, OH 44114
(216)664-2297

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 Cleveland Division of Air Quality. 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



Final Title V Permit
BFI - Glenwillow Landfill
Permit Number: P0095454
Facility ID: 1318247721
Effective Date: 1/14/2013

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 Cleveland Division of Air Quality.

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

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

8. Fees

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

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

9. Marketable Permit Programs

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

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



10. Reasonably Anticipated Operating Scenarios

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

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

11. Reopening for Cause

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

- a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

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

12. Federal and State Enforceability

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

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



13. Compliance Requirements

- a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c) The permittee shall submit progress reports to the 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.



Final Title V Permit
BFI - Glenwillow Landfill
Permit Number: P0095454
Facility ID: 1318247721
Effective Date: 1/14/2013

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 are located at this facility:

None

Each insignificant emissions unit at this facility must comply with all applicable State and Federal regulations, as well as any emissions limitations and/or control requirements contained within a permit-to-install for that emissions unit. Insignificant emissions units listed above that are not subject to specific permit-to-install requirements are subject to one or more applicable requirements contained in the federally-approved versions of OAC Chapters 3745-17, 3745-18, and/or 3745-21.

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

3. The following emissions unit contained in this permit is subject to 40 CFR Part 63, Subpart AAAA, National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills: F002. The complete NESHAP requirements, including the Subpart A General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website at <http://ecfr.gpoaccess.gov> or by contacting the Cleveland Division of Air Quality (Cleveland DAQ).

The permittee must comply with all applicable requirements of 40 CFR Part 63, Subpart AAAA. The permittee shall also comply with all applicable requirements of 40 CFR Part 63, Subpart A (General Provisions) as identified in Table 1 of 40 CFR Part 63, Subpart AAAA. Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR Part 63, Subpart A, and Subpart AAAA.



Final Title V Permit
BFI - Glenwillow Landfill
Permit Number: P0095454
Facility ID: 1318247721
Effective Date: 1/14/2013

C. Emissions Unit Terms and Conditions



1. F002, MSW Landfill

Operations, Property and/or Equipment Description:

MSW Landfill with 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 13-2256 issued on 12/18/1991	8.5 lbs/hr and 37.2 TPY of non-methane organic compound emissions 4.0 lbs/hr and 17.5 TPY of nitrogen oxides emissions 1.5 lbs/hr and 6.6 TPY of sulfur dioxide emissions 17.5 lbs/hr and 76.7 TPY of carbon monoxide emissions 1.1 lbs/hr and 4.8 TPY of particulate emissions 1.5 lbs/hr and 6.6 TPY of HCl emissions The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-76-15(A)(1).
b.	OAC rule 3745-76	See b)(2)a. – b)(2)f. below.
c.	40 CFR 60 Subpart Cc	The requirements specified in this rule are equivalent to the requirements specified in OAC Chapter 3745-76.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-07-(A)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-76-15(A).
e.	40 CFR Part 63, Subpart AAAA	See b)(2)g. and d)(15) below.
f.	40 CFR Part 63 Subpart A	Table 1 to Subpart AAAA of 40 CFR Part 63- Applicability of General Provisions to Subpart AAAA

(2) Additional Terms and Conditions

- a. Design, construction, and siting of the gas extraction wells and gas collection system shall be in accordance with Ohio's Chapter 111(d) plan for existing MSW landfills as approved by the US EPA, the gas collection and control system design (GCCS) plan, and standard industry methods and practices currently in use. The gas collection system shall:
 - i. be designed to handle the maximum expected gas flow rate, as calculated from equations specified in OAC rule 3745-76-10(A)(1), from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;
 - ii. 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. collect gas at a sufficient extraction rate;
 - iv. be designed to minimize off-site migration of subsurface gas; and
 - v. meet all other specifications for active collection systems specified in OAC rule 3745-76-14.
- b. All landfill gas collected shall be routed to a control system designed and operated within the parameters demonstrated during the performance test to reduce non-methane organic compounds (NMOC) emissions by 98 weight-percent, or when an enclosed combustion device is used for control, to either reduce NMOC emissions by 98 weight-percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The NMOC concentration shall be determined by methods specified in OAC rule 3745-76-09(D).



- c. The equipment that constitutes the GCCS shall be properly maintained and kept in good operating condition at all times.
- d. The collection and control system shall be operated in accordance with the applicable provisions specified in OAC rule 3745-76-08, 3745-76-10, and 3745-76-11.
- e. The collection and control system may be capped or removed provided that all of the following conditions are met:
 - i. The landfill shall be a closed landfill as defined in OAC rule 3745-76-01(B)(4). A closure report shall be submitted to the Director as provided in OAC rule 3745-76-12(D).
 - ii. The collection and control system shall have been in operation a minimum of 15 years from when the first well was installed and put into operation.
 - iii. Following the procedures specified in OAC rule 3745-76-09(B), the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on 3 successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.
- f. No visible emissions from the flare, except for a period of time not to exceed a total of 5 minutes during any 2 consecutive hours.

 [Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-76-11(B)(1)]
- g. The permittee shall comply with the applicable Standards and General Continuing Compliance requirements under 40 CFR Part 63, Subpart AAAA, including the following sections:

63.1955(a)(2)	Comply with the requirements of the EPA approved or effective State plan that implements 40 CFR Part 60, Subpart Cc.
63.1955(b)	Comply with the requirements in 63.1960 through 63.1985 and with the General Provisions specified in Table 1 of Subpart AAAA if required to install a collection and control system.
63.1960	Determine compliance through performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. Develop and implement a written SSM plan according to 40 CFR 63.6(e)(3).
63.1965	Definition of a "deviation" for the purposes of landfill monitoring and SSM plans.



63.1975	demonstrating compliance through 3-hour block average calculations.
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c) Operational Restrictions

- (1) Whenever the flare is in operation, a temperature of at least 1400 degrees Fahrenheit (or higher temperature if needed to ensure a 98 weight-percent destruction of the NMOCs), measured by the temperature indicator, must be maintained.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-76-11(B)(1)]

- (2) In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-76-08(E)]

- (3) All recording devices shall be synchronized based on the time of day.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-76-11(B)(1)]

- (4) The skin temperature of the flare shroud within four feet of all the source test ports shall not exceed 250 degrees Fahrenheit. If a heat shield is required to meet the requirement, its design shall be approved by the Ohio EPA prior to its construction. The heat shield, if required to meet the temperature requirement, shall be in place whenever a source test is conducted for the Ohio EPA.

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

- (5) The gas collection system shall be operated such that gas is collected from each area in the MSW landfill where:

- a. municipal solid waste has been placed for 5 years or more; or
- b. acceptance of municipal solid waste has ceased for at least 2 years.

The wells serving the gas collection system shall be placed in accordance with the facility's 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 2 years or more. Each well shall be installed as a measure to abate or minimize the migration of explosive gas when the Director orders the permittee to perform such measures.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-76-08(A)]

- (6) The gas collection system shall be operated in such a manner as to provide negative pressure at each wellhead except under the following conditions:

- a. A fire or increased well temperature. (The permittee shall record instances when positive pressure occurs in efforts to avoid a fire.)



- b. Use of a geomembrane or synthetic cover. (The permittee shall develop acceptable pressure limits in the design plan.)
- c. A decommissioned well. (A well may experience a static positive pressure after shutdown to accommodate for declining flows. All design changes shall be approved by the Director of Ohio EPA.)

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-76-08(B)]

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

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-3745-76-08(C)]

- (8) The permittee shall operate the collection system so that the methane concentration is less than 500 parts per million above the background at the surface of the landfill. As specified in OAC 3745-76-10(C)(3), compliance with the 500 parts per million limitation shall be determined at a distance between 5 and 10 centimeters above the surface of the landfill.

All changes to the surface emission monitoring (SEM) plan shall be approved by the Director of Ohio EPA.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-3745-76-08(D)]

- (9) The permittee shall operate the system such that all collected gases are vented to a control system designed and operated in compliance with OAC rule 3745-76-07(B)(2)(c). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-76-08(E)]

- (10) The permittee shall operate the control system at all times when the collected gas is routed to the system.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-76-08(F)]

- (11) If monitoring demonstrates that the operational requirements in c)(6), c)(7) or c)(8) of this permit are not met, corrective action shall be taken as specified in d)(3)a. through d)(3)c. or d)(18)d.. If corrective actions are taken as specified in d), the monitored exceedance is not a violation of the operational requirements in c)(6), c)(7) or c)(8) of this permit.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-76-08(G)]



d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the flare when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

- a. all 3-hour blocks of time during which the average combustion temperature within the enclosed flare, when the emissions unit was in operation, was less than 1400 degrees Fahrenheit; and
- b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

[Authority for term: OAC rule 3475-76-13(B)(2), OAC rule 3745-76-11(B)(1) and OAC rule 3745-77-01(C)(1)]

- (2) The permittee shall calibrate, maintain, and operate according to the manufacturer's specifications a device that records the flow to the flare, treatment system, and bypass stack. The flow measuring device shall collect and record the flow at least every fifteen minutes; or secure the bypass line valve in the closed position with a car-seal or 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 3745-76-11(B)(2) and OAC rule 3745-77-01(C)(1)]

- (3) The permittee shall operate and maintain a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:

- a. Measure the gauge pressure in the gas collection header on a monthly basis.

Except for the 3 conditions specified in c)(6), if a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days. 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.

- b. Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis (see f)(3) and f)(4). for the nitrogen or oxygen concentration sampling procedures.)



If a well exceeds one of the concentration levels specified in c)(7), 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.

- c. Monitor the temperature of the landfill gas on a monthly basis.

If a well exceeds the temperature level specified in c)(7), 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), OAC rule 3745-76-10(A)(3), OAC rule 3745-76-10(A)(5), and OAC 3745-76-11(A)]

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

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-76-10(C)(5)]

- (5) The permittee shall keep up-to-date, readily accessible, on-site records of the design capacity report which triggered OAC rule 3745-76-07(B), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-76-13(A)]

- (6) The permittee shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed below as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.

- a. The maximum expected gas generation flow rate as calculated in OAC rule 3745-76-10(A)(1). The permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Director.



- b. The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in OAC rule 3745-76-14(A).

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-76-13(B)(1)]

- (7) The permittee shall keep up-to-date, readily accessible continuous records of the gauge pressure in the gas collection header, nitrogen or oxygen concentration in the landfill gas, and temperature of the landfill gas 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), OAC rule 3745-76-11(A) and OAC rule 3745-76-13(C)]

- (8) The permittee shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-76-13(C)(2)]

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

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-76-13(D)(1)]

- (10) The permittee shall keep up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in c) of 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 OAC rule 3745-76-13(E)]

- (11) 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 flare and record whether or not any visible emissions are present and the duration of any visible emissions.

[Authority for term: OAC rule 3745-77-01(C)(1)]

- (12) The GCCS shall be equipped with an auto-dial communication mechanism incorporated into it so that should a malfunction develop with the flare and/or blower system, the gas system technician will automatically be paged by phone.

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



- (13) The permittee shall calculate the NMOC emission rate for purposes of determining when the collection and control system can be removed as provided in OAC rule 3745-76-07(B)(2)(e), using the following equation:

$$M_{\text{NMOC}} = 1.89 \times 10^{-3} Q_{\text{LFG}} C_{\text{NMOC}}$$

Where,

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

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

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

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

The average NMOC concentration, C_{NMOC} , shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of Appendix A of 40 CFR Part 60. If using Method 18 of Appendix A of 40 CFR Part 60, the minimum list of compounds to be tested shall be those published in the most recent compilation of air pollutant emission factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The permittee shall divide the NMOC concentration from Method 25C of Appendix A of 40 CFR Part 60 by 6 to convert from C_{NMOC} , as carbon, to C_{NMOC} , as hexane.

The permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Director.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-76-09(B)]

- (14) The permittee shall comply with the applicable recordkeeping requirements under 40 CFR Part 63, Subpart AAAAA, including the following sections:

63.1980	Comply with the recordkeeping requirements of the EPA approved or effective State plan that implements 40 CFR Part 60, Subpart Cc. Keep records in accordance with the General Provisions of 40 CFR Part 60 and Table 1 of Subpart AAAAA. Keep records of the SSM plans and the SSM plan reports.
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[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 63, Subpart AAAAA]

- (15) The permittee shall operate and maintain a temperature monitor and recorder which measures and records the skin temperature of the flare shroud when emissions testing is being conducted for the flare. Units shall be in degrees Fahrenheit. The monitoring



and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

[Authority for term: OAC rule 3745-77-01(C)(1)]

(16) The permittee shall maintain the following information for the life of the control equipment as measured during the initial performance test or compliance demonstration:

a. The maximum expected gas generation flow rate as calculated by equations specified in 3745-76-10(A)(1) and 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, megagrams 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:

$$Q_M = \sum_{i=1}^n 2kL_oM_i(e^{-kt_i})$$

where,

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

k = methane generation rate constant, year⁻¹



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

M_i = mass of solid waste in the i^{th} section, megagrams

t_i = age of the i^{th} section, years

[Authority for term: OAC rule 3745-76-10(A)(1) and OAC rule 3745-77-01(C)(1)]

- (17) The permittee shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in d)(17)a. through d)(17)d. below. Any closed landfill that has no monitored exceedances of the operational standard in 3 consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 parts per million or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.
- a. The permittee shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30-meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the following specifications:
 - i. The portable analyzer shall meet the instrument specifications provided in section 6 of Method 21 of Appendix A of 40 CFR Part 60, except that "methane" shall replace all references to VOC.
 - ii. The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.
 - iii. To meet the performance evaluation requirements in section 6 of Method 21 of Appendix A of 40 CFR Part 60, the instrument evaluation procedures of section 8.1 of Method 21 of Appendix A of 40 CFR Part 60 shall be used.
 - iv. The calibration procedures provided in section 8.1.1.1 of Method 21 of Appendix A of 40 CFR Part 60 shall be followed immediately before commencing a surface monitoring survey.
 - 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.
 - d. Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified below shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements listed in (c)(7):



- i. The location of each monitored exceedance shall be marked and the location recorded.
- ii. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be remonitored within 10 calendar days of detecting the exceedance.
- iii. If the remonitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the remonitoring shows a third exceedance for the same location, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Ohio EPA for approval. No further monitoring of that location is required until the action specified has been taken.
- iv. Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day remonitoring specified above shall be remonitored 1 month from the initial exceedance. If the 1-month remonitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month remonitoring shows an exceedance, the actions specified above shall be taken.

[Authority for term: OAC rule 3745-76-10(C) and OAC rule 3745-77-01(C)(1)]

e) Reporting Requirements

- (1) Any breakdown or malfunction of the landfill gas flare resulting in the emission of raw landfill gas from the gas collection and control system for more than one hour shall be reported to the Cleveland Division of Air Quality (Cleveland DAQ) 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 3745-76-12(F)(3) and OAC rule 3745-77-01(C)(1)]

- (2) In the event of a potential emergency, such as a fire within the landfill, wells affected may be temporarily shut off, which could result in a positive gauge pressure. The Cleveland DAQ shall be notified within one working day of any shutdowns of any wells.

[Authority for term: OAC rule 3745-76-08(B)(1) and OAC rule 3745-77-01(C)(1)]

- (3) The permittee shall submit quarterly deviation (excursion) reports that include the following information:



- a. an identification of each month during which the gauge pressure in the gas collection header gave a positive pressure reading, and the actual gauge pressure reading for each such month;
- b. an identification of each period during which the temperature in the combustion device was less than 1400 degrees Fahrenheit, and a copy of the recorded chart for each such period;
- c. an identification of each month during which temperature and nitrogen or oxygen limitations specified in (c)(7) were exceeded;
- d. an identification of each quarter during which the methane concentration measured at the surface of the landfill was greater than 500 parts per million above the background levels (as specified in OAC 3745-76-10(C)(3), compliance with the 500 parts per million limitation shall be determined at a distance between 5 and 10 centimeters above the surface of the landfill);
- e. all periods when the gas stream is diverted from the control device or recovery system through a bypass line or the indication of bypass flow or any record which indicates that the bypass line valve was not maintained in the closed position; and
- f. a listing of all periods when the collection system was not operating in excess of five days.

Should a deviation occur, the deviation report shall include details sufficient to determine compliance with the time line provisions established under OAC rule 3745-76-10.

All quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-76-12(F)(1), (2), (4) and (5) Subpart Cc and OAC rule 3745-77-01(C)(1)]

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

[Authority for term: 40 CFR Part 60, Subpart Cc and OAC rule 3745-77-01(C)(1)]

- (5) The permittee shall submit an equipment removal report to the Cleveland DAQ thirty days prior to the removal or cessation of operation of the control equipment. This report shall contain the information specified in OAC rule 3745-76-12(E)(1).

[Authority for term: OAC rule 3745-76-12(E)]



- (6) The permittee shall submit an equipment installation report to the Cleveland DAQ for expansions added pursuant to OAC rule 3745-76-12(A)(3). This report shall include the date, location, and description of the expansion.

[Authority for term: OAC rule 3745-76-12(A)(3) and OAC rule 3745-77-01(C)(1)]

- (7) In addition to the initial performance test report required in OAC rule 3745-76-07(B)(2)(c)(ii), the permittee shall submit the information required in OAC rule 3745-76-12(G)(1) through (5).

[Authority for term: OAC rule 3745-76-12(G) and OAC rule 3745-77-01(C)(1)]

- (8) The permittee shall submit an NMOC annual emission rate report to the Cleveland DAQ. The report shall include all the data, calculations, sample reports and measurements used to estimate the annual emissions.

[Authority for term: OAC rule 3745-76-12(B) and OAC rule 3745-77-01(C)(1)]

f) Testing Requirements

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

a. Emission Limitation

1.1 lbs/hr of particulate emissions

Applicable Compliance Method

If required, compliance shall be determined based upon the results of the emission testing using USEPA methods 1 – 5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-01(C)(1)]

b. Emission Limitation

4.0 lbs/hr of nitrogen oxides emissions

Applicable Compliance Method

If required, compliance shall be determined based upon the results of the emission testing using USEPA methods 1 – 4 and 7E of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-01(C)(1)]



c. Emission Limitation

17.5 lbs/hr of carbon monoxide emissions

Applicable Compliance Method

If required, compliance shall be determined based upon the results of the emission testing using USEPA methods 1 – 4 and 10 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-01(C)(1)]

d. Emission Limitation

1.5 lbs/hr of sulfur dioxide emissions

Applicable Compliance Method

If required, compliance shall be determined based upon the results of the emission testing using USEPA methods 1 – 4 and 6 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-01(C)(1)]

e. Emission Limitation

1.5 lbs/hr of HCl emissions

Applicable Compliance Method

If required, compliance shall be determined based upon the results of the emission testing using USEPA methods 1 – 4 and 26 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-01(C)(1)]

f. Emission Limitation

8.5 lbs/hr of non-methane organic compound emissions

Applicable Compliance Method

If required, compliance shall be determined based upon the results of the emission testing using USEPA methods 1 – 4 and 25C of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-01(C)(1)]

g. Emission Limitation

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



Applicable Compliance Method

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22.

[Authority for term: OAC rule 3745-76-15(D)(1) and OAC rule 3745-77-01(C)(1)]

h. Emission Limitation

- 4.8TPY of particulate emissions
- 17.5 TPY of nitrogen oxides emissions
- 76.7 TPY of carbon monoxide emissions
- 6.6 TPY of sulfur dioxide emissions
- 6.6 TPY of HCl emissions
- 37.2 TPY of non-methane organic compound emissions

Applicable Compliance Method

The annual emission limitations were established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

[Authority for term: OAC rule 3745-77-01(C)(1)]

- (2) The nitrogen level shall be determined using Method 3C of 40 CFR Part 60, Appendix A, unless an alternative test method is established as allowed by OAC rule 3745-76-07(B)(2)(a).

[Authority for term: OAC rule 3745-76-08(C)(1) and OAC rule 3745-77-01(C)(1)]

- (3) Unless an alternative test method is established as allowed by OAC rule 3745-76-07(B)(2)(a), the oxygen level shall be determined by an oxygen meter using Method 3A of 40 CFR Part 60, Appendix A, except that:

- a. the span shall be set so that the regulatory limit is between 20 and 50% of the span;
- b. a data recorder is not required;
- c. only two calibration gases are required, a zero and span, and ambient air may be used as the span;
- d. a calibration error check is not required; and
- e. the allowable sample bias, zero drift, and calibration drift are plus or minus 10%.

[Authority for term: OAC rule 3745-76-08(C)(2) and OAC rule 3745-77-01(C)(1)]



- (4) The flow rate of landfill gas shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the enclosed combustion 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.

[Authority for term: OAC rule 3745-76-09(B)(1) and OAC rule 3745-77-01(C)(1)]

g) Miscellaneous Requirements

- (1) None.