



Environmental Protection Agency

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

10/10/2012

Mr. Joseph Balog
Mt. Eaton Landfill
Mount Eaton Landfill
6055 Rockside Woods Boulevard Suite 100
Independence, OH 44131

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0285000270
Permit Number: P0110393
Permit Type: Renewal
County: Wayne

Certified Mail

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

The issuance of this PTI 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
309 South Fourth Street, Room 222
Columbus, OH 43215

If you have any questions, please contact Ohio EPA DAPC, Northeast District Office at (330)425-9171 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPCWeb page, www.epa.ohio.gov/dapc, by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

Cc: Ohio EPA-NEDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Mt. Eaton Landfill**

Facility ID:	0285000270
Permit Number:	P0110393
Permit Type:	Renewal
Issued:	10/10/2012
Effective:	10/10/2012
Expiration:	10/10/2022



Division of Air Pollution Control
Permit-to-Install and Operate
for
Mt. Eaton Landfill

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Authorization

Facility ID: 0285000270
Application Number(s): A0044990
Permit Number: P0110393
Permit Description: Closed Landfill that is under Directors Finding and Orders to control landfill gases.
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 10/10/2012
Effective Date: 10/10/2012
Expiration Date: 10/10/2022
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Mt. Eaton Landfill
Mt. Eaton Landfill
P.O. Box 336
Mount Eaton, OH 44659

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

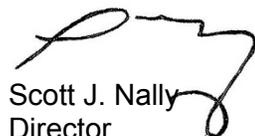
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087
(330)425-9171

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Scott J. Nally
Director



Authorization (continued)

Permit Number: P0110393

Permit Description: Closed Landfill that is under Directors Finding and Orders to control landfill gases.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	F002
Company Equipment ID:	Operations
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- **PTIO fee.** This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- **Annual emissions fee.** Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a



renewal notice to you approximately six months prior to the expiration date of this permit. However, it is very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, Northeast District Office in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit 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.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting¹ a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

¹Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.

C. Emissions Unit Terms and Conditions



1. F002, Operations

Operations, Property and/or Equipment Description:

Municipal solid waste landfill operations

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. All terms and conditions in this permit.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. 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.	State Final Findings and Orders, issued on February 7, 2006.	All terms and conditions, below.

(2) Additional Terms and Conditions

a. The permittee shall install, maintain, and operate a gas control system that collects and controls hydrogen sulfide emissions from all portions of the landfill such that the following ambient concentrations of hydrogen sulfide at and beyond the Facility property line are not exceeded:

- i. 30 ppb by volume as a 1-hour rolling average; and
- ii. 10 ppb by volume as a 24-hour rolling average.

The permittee may submit for Ohio EPA's consideration an extension request that includes justification for any additional time.

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

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 to not 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.
 - c. The permittee shall convey the landfill gas to a control system through the collection header pipe(s). The gas mover equipment shall be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:
 - i. For existing collection systems, the flow data shall be used to project the maximum flow rate.
 - ii. For new collection systems, the maximum flow rate shall be calculated by using a method that has been approved by the Ohio EPA.
 - d. The permittee shall install the gas control system in a manner which allows construction of the final cap system in compliance with the final grades shown on plan sheet 4D of PTI 02-6450 (Division of Materials and Waste Management), issued June 7, 1995 and altered on August 8, 2000.
- (2) The permittee shall comply with the following operational standards for the gas control system. These requirements shall not apply during periods of start-up, shutdown, or malfunction of the gas control system, provided that the duration of start-up, shutdown, or malfunction shall not exceed (5) days for collection systems and shall not exceed one (1) hour for treatment or control devices.
- a. The gas control system shall be operated such that gas is collected from each area, cell or group of cells at the Facility which is contributing to hydrogen sulfide emissions from the Facility.
 - b. Except as provided in v. (below) the gas control system shall be operated with negative pressure at each wellhead. To demonstrate whether the gas collection system flow rate is sufficient to prevent fires, the permittee shall measure gauge pressure in the gas collection header at each individual well, on a monthly basis.
 - i. If positive pressure exists, action shall be initiated to correct the exceedance within five (5) calendar days.
 - ii. If negative pressure cannot be achieved without excess air infiltration within fifteen (15) calendar days of the first measurement of positive pressure, the gas collection system shall be expanded to correct the exceedance within one-hundred twenty (120) days of the initial measurement of positive pressure. The permittee is not required to

- expand the system during the first sixty (60) days after gas control system start-up.
- iii. Any attempted corrective measure shall not cause violations of other requirements contained in this permit.
 - iv. The permittee may establish an alternative time line for correcting the exceedance, upon approval from Ohio EPA.
 - v. Positive pressure at a wellhead shall not be considered a violation if it occurs under the following conditions:
 - (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 other synthetic cover - The permittee shall develop acceptable pressure limits in the design plan; and
 - (c) Decommissioned well - A well may experience a static positive pressure after shutdown to accommodate declining flows.
- c. The permittee shall operate each interior wellhead in the collection system with a landfill gas temperature of less than fifty-five (55) degrees Celsius and with either a nitrogen level of less than twenty (20) percent or an oxygen level of less than five (5) percent. The permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well, upon approval from Ohio EPA. A higher operating value demonstration shall show supporting data that the elevated parameter would not cause fires nor significantly inhibit anaerobic decomposition by killing methanogens.
- i. The nitrogen level shall be determined using United States Environmental Protection Agency (U.S. EPA) Federal Reference Method (FRM) 3C, as specified in 40 CFR, Part 60, Appendix A, unless an alternative test method is approved by Ohio EPA.
 - ii. Unless an alternative test method is approved by the Ohio EPA, the oxygen level shall be determined by an oxygen meter using FRM 3A or 3C, pursuant to 40 CFR, Part 60, Appendix A, except that:
 - (a) The span shall be set so that the regulatory limit is between twenty (20) and fifty (50) percent 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 ten (+/- 10) percent.

- d. To identify whether excess air infiltration into the landfill is occurring, the permittee shall monitor each well monthly for temperature, and nitrogen or oxygen.
 - i. If a well exceeds one of the operating parameters specified in c)(2)b., action shall be initiated to correct the exceedance within five (5) calendar days.
 - ii. If correction of the exceedance cannot be achieved within fifteen (15) calendar days of the first measurement of the exceedance, the gas collection system shall be expanded to correct the exceedance within one-hundred-twenty (120) days of the initial exceedance.
 - iii. Any attempted corrective measure shall not cause violations of other requirements contained in this permit.
 - iv. The permittee may establish an alternative time line for correcting the exceedance, upon approval from Ohio EPA.
- e. The gas control system shall be operated such that all collected gases are vented to a control system designed and operated in compliance with this permit. In the event the gas collection system or flare is inoperable, the gas mover system shall be shut down and all valves in the gas control system contributing to venting of the gas to the atmosphere shall be closed within one (1) hour.
- f. The control or treatment system shall be operated at all times when the collected gas is routed to the system.
- g. Any scheduled maintenance of air pollution control equipment shall be performed in accordance with OAC rule 3745-15-06(A). Except as provided by this rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accomplished by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

If corrective action is taken for an exceedance of a wellhead pressure, temperature, nitrogen, or oxygen value, the exceedance shall not constitute a violation of the operational requirements.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) 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:
 - a. measure the gauge pressure in the gas collection header on a monthly basis, as described in c)(2);
 - b. monitor the nitrogen or oxygen concentration in the landfill gas on a monthly basis, as described in c)(2); and
 - c. monitor the temperature of the landfill gas on a monthly basis, as described in c)(2).

- (2) When using an open flare, the permittee shall install, calibrate, maintain, and operate the following monitoring equipment according to the manufacturer's specifications:
- a. A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame;
 - b. A device that records flow to or bypass of the flare. The 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 fifteen (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.
- (3) Except as provided, the permittee shall keep up-to-date, readily accessible records, for the life of the control equipment, of details of the equipment installed as measured during initial performance tests or system adjustments. Records of subsequent tests or monitoring shall be maintained for a minimum of five (5) years. Records of the control device vendor specifications shall be maintained until removal of the control device.
- a. The permittee may use any method to determine the maximum gas generation flow rate, provided the method has been approved by Ohio EPA.
 - b. The density of wells, horizontal collectors, surface collectors, or other gas extraction devices shall be determined using the procedures specified in c)(1).
 - c. When using an open flare, records of the flare type (i.e., steam-assisted, air-assisted, or non-assisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60.18, required only if a performance test is requested by Ohio EPA; continuous records of the flare pilot flame or flare flame monitoring; and records of all periods of operations during which the plot flame or the flare flame is absent shall be maintained.
- (4) Except as provided, the permittee shall keep for five (5) years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in this permit.
- a. 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; and
 - b. When using an open flare, the permittee shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring, and up-to-date, readily accessible records of all period of operation in which the flame or flare pilot flame is absent.

- (5) Except as provided, 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 keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors.
- (6) Except as provided, the permittee shall keep for at least five (5) years up-to-date, readily accessible records of all gas control system exceedances of the operational standards in this permit, the reading in the subsequent month regardless of whether the subsequent reading is an exceedance, and the location of each exceedance.
- (7) The permittee shall install ambient hydrogen sulfide monitor(s) for this facility, and establish and operate the monitor(s) pursuant to the following:
- a. The number and location of monitoring site(s) shall be based on accepted modeling practice and shall adequately monitor areas of maximum concentration of hydrogen sulfide at and beyond the Facility property line. Determination of the hydrogen sulfide sampling location(s) shall be coordinated with, and subject to, the prior approval of Ohio EPA.
 - b. The continuous perimeter monitoring and met station plan shall provide documentation detailing the criteria and reasoning for the number and location of monitoring site(s).
 - c. All samplers shall be sited and located in accordance with the requirements of 40 CFR Part 58, Appendix E, and any subsequent amendments. Upon request, variation from these requirements may be approved by Ohio EPA.
 - d. Unless the permittee complies with the requirements for alternative hydrogen sulfide monitors, the sampler(s) shall be of an automated and continuous type that measure(s) the concentration of sulfur dioxide (SO₂) in the ambient air. The hydrogen sulfide (H₂S) monitor(s) shall have an H₂S to SO₂ converter integrated within an SO₂ analyzer. H₂S readings shall be the result of converting H₂S in the sample to SO₂ with subsequent detection by the analyzer using: $H_2S + 3/2(O_2) \rightarrow SO_2 + H_2O$. Detection of SO₂ shall be based upon the measurement of the fluorescence of SO₂ produced by its absorption of ultraviolet radiation in the 2300 Angstrom to 1900 Angstrom region. The perimeter monitor(s) shall meet reference or equivalent method criteria for SO₂ as specified in 40 CFR, Part 53. Proof of meeting these criteria shall consist of the monitor(s) being designation number(s) shall be submitted as meeting these criteria.
 - e. Unless the permittee complies with the requirements for alternative hydrogen sulfide monitors, the permittee shall operate the perimeter monitors pursuant to the operating procedures identified in 40 CFR, Part 58 and the "Quality Assurance Handbook for Air Pollution Measurement Systems" Volume I - Principles (EPA-600/9-76-005) and Volume II Ambient Air Specific Methods (EPA-600/4-77-027a). The Facility shall meet the quality assurance activities in 40 CFR, Part 58, appendix A. Independent audit results (accuracy) and precision results must be submitted quarterly to Ohio EPA within forty-five (45) days after the end of each calendar quarter.

- f. Ohio EPA shall be provided with access to each site location. The site operator and/or supervisor shall accompany Ohio EPA on any site inspection or audit, and respond to inquiries regarding instrument operations and maintenance.
- g. Appropriate corrective actions shall be taken by the permittee following the identification of any problem by the independent auditor (when an auditor is hired by the permittee to maintain the permittee's hydrogen sulfide ambient air perimeter monitors), or Ohio EPA.
- h. Upon request, Ohio EPA shall provide the permittee with a copy of Ohio EPA's hydrogen sulfide analyzer specifications as they are written in Ohio EPA's request for quote (RFQ) number RFQ02 H2 S2005, as approved by U.S. EPA, for use as a reference.
- i. In lieu of the monitor required pursuant in "e." above, the permittee may install a Jerome Meter, Model 651 hydrogen sulfide monitor (manufactured by Arizona Instruments, Inc.), provided the following requirements are met.
 - i. The Jerome Meter, Model 651 shall be maintained and operated pursuant to manufacturer's specifications:
 - ii. Independent audits shall be performed on a quarterly basis. After one (year), the permittee may submit a revised audit schedule to the Director for consideration. Ohio EPA may require additional audits be performed upon request;
 - iii. Not later than thirty (30) days prior to the proposed audit date(s), the permittee shall notify Ohio EPA of the audit date(s). Failure to submit such notification may result in Ohio EPA's refusal to accept the audit results;
 - iv. The audits shall be performed using Arizona Instruments, Inc's low level hydrogen sulfide functional test module. The audits shall follow the manufacturer's instructions pursuant to the most recent version of manual number 700-0095-A, or any publication that may replace this manual; and
 - v. Audit results shall be submitted to Ohio EPA within forty-five (45) days after the date of the audit.
- j. If the permittee seeks to install a hydrogen sulfide monitor that does not meet the specifications in this permit, the permittee shall provide information satisfactory to Ohio EPA describing the design and operation of the monitor, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. Ohio EPA may specify additional appropriate monitoring procedures.
- k. If additional data demonstrates the necessity to expand the system, Ohio EPA reserves the right to require additional hydrogen sulfide monitor(s) be installed pursuant to a revised continuous perimeter monitoring and met station plan.

- (8) The permittee shall install the met station(s) for this Facility, and establish and operate the met station(s) pursuant to the following:
- a. The number and location of met station(s) shall be based on accepted modeling practice and shall adequately monitor weather at the Facility, and be representative of the met conditions affecting the transport of emissions from the sources of hydrogen sulfide. Determination of the met station location(s) shall be coordinated with, and subject to the prior approval of Ohio EPA.
 - b. This plan shall provide documentation detailing the criteria and reasoning for the number and location of the met station(s).
 - c. All met station(s) shall be sited and located in accordance with the requirements of EPA-454/R-99-005, Meteorological Monitoring Guidance for Regulatory Modeling Applications, February 2000 and/or, EPA-450/4-87-007, Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD), May 1987. Upon request, variation from this standard may be approved by Ohio EPA.
 - d. Each met station shall meet the following criteria
 - i. The met station shall be capable of accurately measuring temperature, wind, speed, wind direction, and barometric pressure on a continuous basis;
 - ii. The met station shall record wind direction in one degree increments;
 - iii. The met station shall be equipped with a data recording device capable of recording each reading; and
 - iv. The met station shall be able to sample and record measurements at least three-hundred (360) times per hour and generate hourly average data for all parameters as well as standard deviation and turbulence wind data for use in the calculation of atmospheric stability.
- (9) The monitoring devices and recorders required by this permit shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals, or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.
- (10) An operator's log book shall be maintained for each monitoring site and met station with a format and content as specified in guidance provided by Ohio EPA.
- (11) The permittee shall continue to operate the hydrogen sulfide ambient monitor(s) and met station(s) as described in this permit until written approval from the Director (which shall not be unreasonably withheld or delayed) to discontinue monitoring is received. In determining such a discontinuation, the Director shall consider the concentration measured by the monitor(s), the trends in air quality concentrations, and the value of the air quality data in fulfilling the goals and requirements of this permit.

e) Reporting Requirements

- (1) The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to Ohio EPA in accordance with OAC rule 3745-15-06(B).
- (2) The permittee shall submit to Ohio EPA annual reports of the recorded information in this paragraph.
 - a. the value and length of time for each exceedance of applicable parameters monitored;
 - b. a description and the duration of all periods when the gas stream is diverted from the control device through a bypass line or there is an indication of bypass flow;
 - c. a description and the duration of all periods when the control device was not operating for a period exceeding (1) hour;
 - d. all periods when the collection system was not operating in excess of five (5) days; and
 - e. the date of installation and the location of each well or collection system expansion.
- (3) The permittee shall include the following with each subsequent gas control system modification:
 - a. a diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;
 - b. the data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;
 - c. the sum of the gas generation flow rates for all areas from which collection wells have been excluded based on non-productivity and the calculations of gas generation flow rate for each excluded area;
 - d. the provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and
 - e. the provisions for the control of off-site migration.
- (4) The permittee shall comply with the following reporting requirements for the ambient hydrogen sulfide perimeter monitor(s) and met stations(s). All air quality monitoring and met data and a summary report shall be submitted to Ohio EPA on a quarterly basis. All such data shall be submitted electronically in a commonly used spreadsheet-compatible format; the summary report shall be submitted in hard copy. Upon request by Ohio EPA, more timely data shall be made available. The following information shall be submitted as part of the electronic report:

- a. continuous hydrogen sulfide concentration readings;
 - b. 1-hour and 24-hour rolling hydrogen sulfide concentration averages;
 - c. continuous temperature, wind speed and direction, and barometric pressure;
 - d. 1-hour and 24-hour rolling averages for temperature, wind speed and direction, and barometric pressure; and
 - e. corresponding times and dates.
- (5) Deviation reports documenting the following occurrences for the ambient hydrogen sulfide perimeter monitor(s) and met station(s) shall be submitted within forty-eight (48) hours of each occurrence:
- a. each occurrence when data from the hydrogen sulfide monitor(s) is lost;
 - b. each occurrence when data from the met station(s) is lost;
 - c. any exceedances of the allowable hydrogen sulfide concentration levels;
 - d. the beginning and ending dates and times of each occurrence;
 - e. the correlating weather data for each exceedance;
 - f. any known causes for the exceedances (i.e., gas control system maintenance or malfunction, documented outside influences, etc.); and
 - g. any corrective measures taken to return to compliance.
- (6) 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 Ohio EPA.
 - b. Except as provided, quarterly written reports of: (a) 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, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to Ohio EPA. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., 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.)
- (7) Each record of any monitoring data, testing data, and supporting information required pursuant to this permit shall be retained for a period of five (5) years from the date the record was created. Supporting 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.

- (8) The permittee shall furnish to the Director, 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, or any authorized representative of the Director, copies of records required to be kept by this permit.
- 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. None.
- g) Miscellaneous Requirements
- (1) After a minimum of fifteen (15) years of operation of the gas control system during the solid waste landfill post-closure care period as defined in OAC rule 3745-27-14, the permittee may submit to the Director a request to cap or remove the gas control system. Sufficient justification shall be submitted and Director's written approval shall be obtained prior to discontinuing the operation of the gas control system.
 - (2) The permittee shall not recirculate leachate on any portion of the Facility without prior written approval from Ohio EPA.
 - (3) The permittee shall not use leachate as a dust suppressant at the Facility without prior written approval from Ohio EPA.