



Environmental Protection Agency

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

7/20/2012

Certified Mail

Timothy Nytra  
Carbon Limestone Sanitary Landfill  
8100 South State Line Road  
Lowellville, OH 44436

No	TOXIC REVIEW
No	PSD
Yes	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
Yes	MACT/GACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL  
Facility ID: 0250070850  
Permit Number: P0109845  
Permit Type: Initial Installation  
County: Mahoning

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, Youngstown-Vindicator. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Issued Air Pollution Control Permits" link. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

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

and Ohio EPA DAPC, Northeast District Office  
2110 East Aurora Road  
Twinsburg, OH 44087

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Northeast District Office at (330)425-9171.

Sincerely,

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

Cc: U.S. EPA Region 5 -Via E-Mail Notification  
Ohio EPA-NEDO; Pennsylvania; West Virginia





## Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

Carbon Limestone Landfill is an existing landfill in Mahoning County that currently operates five phases. This permit action is a Chapter 31 modification for the expansion of the landfill in order to fill the valley between Phase 2 and Phase 3 to form one unified phase and thus increasing the site design capacity to 97,000,890 tons of MSW. In addition, this action permits a new 1,000 cfm candle flare to be used when an engine at the associate bioenergy plant needs to go down.

3. Facility Emissions and Attainment Status:

Carbon Limestone Landfill is subject to the Title V program and currently has an extended Title V permit (P0085729) issued final 6/6/2001. Mahoning County is attainment for all criteria pollutants. The facility, when considered is a major stationary source for all criteria pollutants for PSD.

4. Source Emissions:

The landfill is currently permitted for an Authorized Maximum Daily Waste Receipts (AMDWR) for 11,000 tons per day which equates to 4,015,000 tons per year. The facility proposes to limit the maximum annual acceptance limitation to 1,600,000 tons per year of organic-containing waste, beginning in year 2012. Limiting the annual organic containing waste acceptance will limit the gas generation rate and therefore limit VOC emissions below the PSD threshold of 250 TPY. Further, the reduced gas generation rate will limit the control capacity needed to be installed to comply with NSPS Subpart WWW and MACT Subpart AAAA. For example, limiting the organic-containing waste receipts will eliminate the need for two additional enclosed flares to be installed prior to the peak gas generating year of 2048.

The organic-containing waste limitation was set on an annual basis. Daily recordkeeping and annual reporting of the organic-containing waste receipts are required to assure compliance with the limitation

The project will exceed 100,000 TPY of CO<sub>2</sub>e. However, the applicability of major NSR for greenhouse gas has been deferred for three years from July 1, 2011 for landfills and other biogenic sources.

5. Conclusion:

The limitation on the annual organic containing waste receipts to 1,600,000 tons per year is sufficient to limit the VOC emissions below the major new source threshold of 250 tons per year. Daily recordkeeping and annual reporting of the organic-containing waste receipts and annual VOC emissions required are sufficient to assure compliance with the limitation. The facility's and this projects potential emissions will remain below the major stationary source threshold.

6. Please provide additional notes or comments as necessary:

None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

Pollutant	Tons Per Year
Fugitive PE	11.35
Fugitive VOC	57.5
CO flare	249
NOx flare	99.6
Sox Flare	23.2
PM10 flare	30.23
VOC flare	3.51
HCl	13.2
Total HAPs	32.0
Total NMOC	156.4

PUBLIC NOTICE  
7/20/2012 Issuance of Draft Air Pollution Permit-To-Install

Carbon Limestone Sanitary Landfill  
8100 South State Line Road,  
Lowellville, OH 44436

Mahoning County

FACILITY DESC.: Solid Waste Landfill

PERMIT #: P0109845

PERMIT TYPE: Initial Installation

PERMIT DESC: Expansion of the landfill in order to extend the life of the landfill and total design capacity. Additionally, a open flare will be installed to control collected landfill gas.

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the permit # or: Amysue O'Reilly, Ohio EPA DAPC, Northeast District Office, 2110 East Aurora Road, Twinsburg, OH 44087. Ph: (330)425-9171





**DRAFT**

**Division of Air Pollution Control  
Permit-to-Install  
for  
Carbon Limestone Sanitary Landfill**

Facility ID:	0250070850
Permit Number:	P0109845
Permit Type:	Initial Installation
Issued:	7/20/2012
Effective:	To be entered upon final issuance





Division of Air Pollution Control
Permit-to-Install
for
Carbon Limestone Sanitary Landfill

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## Authorization

Facility ID: 0250070850  
Facility Description: Sanitary Landfill  
Application Number(s): A0044198  
Permit Number: P0109845  
Permit Description: Expansion of the landfill in order to extend the life of the landfill and total design capacity. Additionally, a open flare will be installed to control collected landfill gas.  
Permit Type: Initial Installation  
Permit Fee: \$1,250.00 *DO NOT send payment at this time, subject to change before final issuance*  
Issue Date: 7/20/2012  
Effective Date: To be entered upon final issuance

This document constitutes issuance to:

Carbon Limestone Sanitary Landfill  
8100 South State Line Road  
Lowellville, OH 44436

of a Permit-to-Install 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 a Permit-to-Install for the 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 emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally  
Director



## **Authorization (continued)**

Permit Number: P0109845

Permit Description: Expansion of the landfill in order to extend the life of the landfill and total design capacity. Additionally, a open flare will be installed to control collected landfill gas.

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

<b>Emissions Unit ID:</b>	<b>F002</b>
Company Equipment ID:	MSW Landfill
Superseded Permit Number:	02-22526
General Permit Category and Type:	Not Applicable



## **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.2.a), Severability Clause
  - (2) Standard Term and Condition A.3.c) through A. 3.e)General Requirements
  - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
  - (4) Standard Term and Condition A.9., Reporting Requirements
  - (5) Standard Term and Condition A.10., Applicability
  - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
  - (7) Standard Term and Condition A.14., Public Disclosure
  - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
  - (9) Standard Term and Condition A.16., Fees
  - (10) Standard Term and Condition A.17., Permit Transfers

**2. Severability Clause**

- a) 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.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they 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 and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

**3. 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 re-issuance, or modification.

- 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, revoked, or revoked and reissued, for cause. 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 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.

#### **4. 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, 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.
- 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, 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.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.

- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northeast District Office. The written 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. See A.15. below if no deviations occurred during the quarter.
  - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Ohio EPA DAPC, Northeast District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
  - (4) This permit is for an emissions unit located at a Title V facility. 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 are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

## 5. 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, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Northeast District Office in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

## 6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this 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.



- c) 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 ORC section 3704.08.
  - (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.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, Northeast District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

**7. Best Available Technology**

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

**8. 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.

**9. Reporting Requirements**

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have

been detected by the testing, monitoring, and recordkeeping 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 the Ohio EPA DAPC, Northeast District Office. 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.)

## **10. Applicability**

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

## **11. Construction of New Sources(s) and Authorization to Install**

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., 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) by submitting a certification from the authorized 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 authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" 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).



- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., 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). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

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

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

## 12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

## 13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

## 14. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.



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

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., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

**16. 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. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

**17. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

**18. Risk Management Plans**

If the permittee is required to 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"), the permittee shall comply with the requirement to register such a plan.

**19. 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.

## **B. Facility-Wide Terms and Conditions**

**Effective Date:** To be entered upon final issuance

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
  - a) None.

## C. Emissions Unit Terms and Conditions



1. F002, MSW Landfill

Operations, Property and/or Equipment Description:

Municipal Solid Waste (MSW) landfill operations, waste disposal activities including dumping, spreading, compacting, and covering. The active landfill gas capture and collection system includes two 6,000 cfm enclosed combustors and a 1000 cfm candle flare. Alternatively, the landfill gas may be sold to a beneficial engine plant. The landfill is not permitted to accept regulated asbestos-containing waste.

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.	ORC 3704.03(T)	<p>The requirements of this rule are equivalent to the 40 CFR Part 63, Subpart AAAAA as specified below. The GCCS is designed to capture and destroy NMOC as a surrogate for HAP emissions.</p> <p><b>Fugitive emissions from the landfill hill:</b></p> <p>Visible emissions of non-asbestos fugitive dust (load-in and wind erosion) from this emissions unit shall not exceed 20% opacity as a 3-minute average.</p> <p>Fugitive volatile organic compound (VOC) emissions shall not exceed 57.5 tons per rolling, 12-month period.</p> <p>Fugitive particulate emissions (PE) shall not exceed 12.4 tons per year.</p> <p>See b)(2)h.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p><b>6,000 ft<sup>3</sup>/min Enclosed Combustor FL-150 and 6,000 ft<sup>3</sup>/min Enclosed Combustor FL-100:</b></p> <p>Carbon monoxide (CO) emissions shall not exceed 0.15 lb/mmBtu, 27.0 lbs/hr and 118.3 tons per year from each enclosed combustor.</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 0.06 lb/mmBtu, 10.8 lbs/hr and 47.3 tons per year from each enclosed combustor.</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 2.8 lbs/hr and 12.3 tons per year from each enclosed combustor.</p> <p>Particulate matter less than 10 microns in diameter (PM<sub>10</sub>) shall not exceed 3.2 lbs/hr and 14.0 tons per year from each enclosed combustor.</p> <p>All PE from each enclosed combustor are PM<sub>10</sub>.</p> <p>VOC emissions shall not exceed 0.37 lb/hr from each enclosed combustor.</p> <p><b>1000 ft<sup>3</sup>/min Candlestick Flare</b></p> <p>CO emissions shall not exceed 0.37 lb/mmBtu from the candlestick flare.</p> <p>NO<sub>x</sub> emissions shall not exceed 0.068 lb/mmBtu from the candlestick flare.</p> <p>SO<sub>2</sub> emissions shall not exceed 0.467 lb/hr from the candlestick flare.</p> <p>PM<sub>10</sub> emissions shall not exceed 0.51 lb/hr from the candlestick flare.</p> <p>All PE from the candlestick flare are PM<sub>10</sub>.</p> <p>VOC emissions shall not exceed 0.062 lb/hr from the candlestick flare.</p>
b.	40 CFR 60, Subpart WWW (60.750-759)	<i>(open flare)</i> There shall be no visible particulate emissions from the candlestick flare, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	<p>[In accordance with 40 CFR Part 60.752 this emissions unit is an existing municipal solid waste landfill having a design capacity greater than 2.5 million Mg and a NMOC emission rate of greater than 50 Mg/yr, and is subject to the emissions limitations/control measures specified in this section.]</p>	<p>The open flare shall be designed and operated in accordance with 40 CFR 60.18.</p> <p><i>(control system)</i> The control system shall be designed and operated to reduce NMOC by 98%, by weight; or, if the control is an enclosed combustion device, shall either reduce the NMOC by 98%, by weight or reduce the outlet NMOC concentration to less than 20 ppm by volume, on a dry basis as hexane at 3% oxygen.</p> <p>Visible particulate emissions from the stacks serving enclosed combustors Flare-100 and Flare-150 shall not exceed 10% opacity as a 6-minute average.</p> <p><i>(treatment system)</i> The permittee shall route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of 40 CFR Part 60.752(b)(2)(iii)(A) <i>(open flare)</i> or (B) <i>(control system)</i>.</p> <p>See b)(2)a.</p>
c.	<p>40 CFR Part 63, Subpart AAAA (63.1930-1990)</p> <p>[In accordance with 40 CFR Part 63.1935, this emissions unit is an existing municipal solid waste landfill with a design capacity greater than 2.5 million Mg and a NMOC emission rate of greater than 50 Mg/yr.]</p>	<p>See b)(2)b.</p>
d.	<p>OAC rule 3745-17-08(B)</p>	<p>The permittee is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).</p>



e.	OAC rule 3745-17-07(B)(1)	This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(B) pursuant to OAC rule 3745-17-07(B)(11)(e).
f.	OAC chapter 3745-19	See b)(2)c.
g.	OAC rule 3745-20-02 OAC rule 3745-20-06	Deposition and burial operations of any suspected non-regulated asbestos-containing waste or demolition debris shall be conducted in a manner that prevents any asbestos content from being broken up or dispersed before such materials are buried. See b)(2)i and b)(2)j.
h.	OAC rule 3745-20-07(D)	See b)(2)d.
i.	OAC rule 3745-31-05(D)	The total VOC emissions from the landfill and control systems shall not exceed 249 tons per year.  See b)(2)k.

(2) Additional Terms and Conditions

- a. The complete NSPS requirements, including the General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting Ohio EPA, Northeast District Office, Division of Air Pollution Control. The applicable requirements are listed in c)(1), d)(1), e)(1) and f)(2) below.

60.752(b)(2)(i)	Collection and control system design plan requirements
60.752(b)(2)(ii)	Collection and control system installation requirements
60.752(b)(2)(iii)	Control device design and operating requirements
60.755(a)(6)	Approval by Administrator for non-conforming GCCS
60.755(b)	Timeline for placement of wells
60.759	Active collection system specifications

- b. The complete MACT requirements, including the MACT General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting Ohio EPA, Northeast District Office, Division of Air Pollution Control. The applicable requirements are listed in c)(2), d)(2), and e)(2) below.



63.1990	Definitions
63.1945	Compliance timeframe
63.1950	Termination of compliance requirements
63.1955(a)(1)	Compliance with 40 CFR 60, subpart WWW
63.1955(b)	Compliance standards for collection and control system
63.1955(c)	Approval by Administrator for non-conforming GCCS

- c. There shall be no open burning, in violation of OAC chapter 3745-19, at this facility.
- d. If this landfill is permanently closed, the permittee shall comply with all of the applicable provisions of OAC rule 3745-20-07.
- e. The following landfill fugitive dust operations/sources are covered by this permit and subject to the above requirements:
  - i. daily cover and handling and placement;
  - ii. solid waste handling (dumping);
  - iii. spreading, grading and compaction;
  - iv. truck loading and unloading;
  - v. soil transport; and
  - vi. storage pile activities (loading, unloading, wind erosion).
- f. The permittee shall employ best available control measures for the above identified landfill fugitive dust operations/sources for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat with water and/or any other suitable dust suppression chemicals at sufficient treatment frequencies to ensure compliance.
- g. The above-mentioned control measures shall be employed if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measures are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measures shall continue during any such operation until further observation affirms that use of the measures is unnecessary. Implementation of the control measures shall not be necessary for fugitive dust sources which are covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.

- h. The annual VOC emission limitation represents the VOC portion of the fugitive nonmethane organic compound (NMOC) emission rate from the landfill. For the purpose of this permit and federal enforceability, NMOC emissions have been converted to VOC by applying the AP-42 Chapter 2.4 (11/98) conversion rate of 39% to the predicted NMOC emission rate from the Landfill Gas Emission Model (LandGEM). An NMOC emission limit was not established under this rule because there is not an established national ambient air quality standard (NAAQS) associated with NMOC. 40 CFR 60.750 et seq. (NSPS, Subpart WWW) addresses NMOC emissions; therefore, the monitoring, record keeping, and reporting requirements of this permit will reflect NMOC rather than VOC.
- i. The facility cannot accept for disposal any regulated asbestos-containing material as defined in the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Asbestos, 40 CFR Part 61, Subpart M, Section 141 and OAC rule 3745-20, or any subsequent revisions to either rule. Regulated asbestos-containing material is defined to include:
  - i. friable asbestos material;
  - ii. Category I nonfriable asbestos-containing material that has become friable;
  - iii. Category I nonfriable asbestos-containing material that will be or has been subjected to sanding, grinding, cutting, or abrading; or
  - iv. Category II nonfriable asbestos-containing material that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.
- j. The permittee shall be limited to accepting only non-regulated asbestos-containing waste materials. The permittee shall ensure that any Category I nonfriable asbestos-containing waste materials accepted for disposal will not be subjected to sanding, grinding, cutting, or abrading and shall not become friable during processing at the landfill; and shall ensure that Category II nonfriable asbestos-containing waste materials accepted for disposal do not become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during its handling, transfer, and burial at the landfill. Any nonfriable Category I or Category II asbestos-containing material that was generated from a NESHAP source and which becomes friable, also becomes subject to the Asbestos NESHAP regulations. If any regulated asbestos-containing waste material arrives at the landfill it cannot be accepted for disposal; and if any non-regulated asbestos-containing material becomes friable after it is accepted for disposal the permittee shall:
  - i. cause or permit no visible emissions to the outside air from the asbestos-containing waste materials during on-site transportation, transfer, deposition, or compacting operations;



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- ii. assure that deposition and burial operations are conducted in a manner which prevents handling by equipment or persons that causes asbestos-containing waste materials to be broken-up or dispersed before the materials are buried;
  - iii. cover the asbestos-containing waste material with at least twelve inches of nonasbestos-containing material, as soon as practicable after deposition, but no later than at the end of the operating day; and
  - iv. assure that during the unloading, deposition, burial and initial compaction of asbestos-containing waste materials, the disposal site is restricted adequately to deter unauthorized entry of the general public and any unauthorized personnel to within one hundred feet of the operations.
- k. The maximum annual organic-containing waste acceptance shall not exceed 1,600,000 tons per year. The list of organic-containing waste codes shall be proposed by the permittee and approved annually by Ohio EPA, Division of Air Pollution Control, Northeast District Office.

c) Operational Restrictions

- (1) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart WWW, including the following sections:

60.753(a)	Collection system installation requirement
60.753(b)	Collection system negative pressure requirements
60.753(c)	Wellhead operational standards
60.753(d)	Surface monitoring standards
60.753(e)	Collection or control system shutdown
60.753(f)	Operate control or treatment system
60.753(g)	Corrective action for operational parameters

- (2) The permittee shall comply with the applicable restrictions required under 40 CFR Part 63, Subpart AAAA, including the following sections:

63.1960	Compliance demonstration, deviations, SSM plan
63.1965	What constitutes a deviation

- (3) The maximum daily waste receipts for this emissions unit shall not exceed 11,000 tons.
- (4) The permittee shall cover and compact asbestos wastes in accordance with the following requirements:
  - a. As soon as practical after the placement of asbestos, but no later than the end of each working day, the asbestos-containing waste materials deposited at the site during the operating day shall be covered with at least 12 inches of

non-asbestos-containing materials. Once the asbestos-containing materials are covered, the area shall be compacted.

- b. Care shall be taken to ensure that disposed asbestos shall not be re-excavated in subsequent operations. Any accidentally exposed material shall be immediately recovered in accordance with the provisions of this permit.
- c. Asbestos-containing waste materials shall be separated from the landfill final grade by no less than 24 inches of compacted non-asbestos-containing materials or by at least 6 inches of compacted non-asbestos-containing materials with a permanent cover of vegetation over the area, or in accordance with current requirements for closure, whichever is more stringent.

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

- (1) The permittee shall comply with the applicable monitoring and record keeping requirements required under 40 CFR Part 60, Subpart WWW, including the following sections:

60.754(b)	NMOC emission rate calculation after installation of collection and control system
60.755(a)(1)	Gas generation flow rate calculation to determine compliance
60.755(a)(2)	Determining sufficient density of gas collectors
60.755(a)(3)	Gas collection system monitoring and corrective action
60.755(a)(5)	Well monitoring and corrective action
60.755(c)	Surface monitoring procedures and corrective actions
60.756(a)	Monitoring of active gas collection system
60.756(b)	Monitoring of enclosed combustor and open flare
60.756(c)	Records retention
60.756(f)	Surface monitoring frequency
60.758(a)	Recordkeeping requirements
60.758(b)	Recordkeeping for flare compliance demonstration and design
60.758(c)	Recordkeeping for control device parametric monitoring deviations
60.758(d)	Recordkeeping for gas collector map
60.758(e)	Recordkeeping for collection and control system exceedances

- (2) The permittee shall comply with the applicable monitoring and record keeping restrictions required under 40 CFR Part 63, Subpart AAAA, including the following sections:



63.1960	Compliance demonstration, deviations, SSM plan
63.1965	What constitutes a deviation
63.1975	Clarification of 3-hour block averages
63.1980(a)	Recordkeeping according to 40 CFR 60, subpart WWW
63.1980(b)	Recordkeeping according to 40 CFR 63 and Table 1, NESHAP General Provisions, of this subpart including SSM plan requirements

- (3) The permittee shall continuously monitor and record the landfill gas flow routed to the third party treatment system that processes the collected gas for beneficial use.
- (4) The permittee shall identify and record each instance that the enclosed combustors or flare were not in operation when the landfill gas was not being routed to the third party treatment system.
- (5) The permittee shall classify each load of waste received by waste code and record the weight received for each waste code daily, in tons.
- (6) The permittee shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing and/or nondegradable wastes, excluded from collection as provided in 40 CFR 60.759(a)(3)(i), as well as any nonproductive areas excluded from collection as provided in 40 CFR 60.759(a)(3)(ii).
- (7) The permittee shall perform inspections of the landfill operation areas daily.

The inspections shall be performed during representative, normal operating conditions. The purpose of the inspections is to determine the need for implementing the abovementioned control measures for particulate emissions. The inspections shall be performed during representative, normal operating conditions. No inspection shall be necessary for a landfill fugitive dust operation/source that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above identified event shall be performed as soon as such event(s) has (have) ended, except if the next inspection is within one week.

- (8) The permittee shall maintain a daily operations log which records/documents any watering activity employed to minimize or eliminate visible emissions of fugitive dust for each waste dumping/placement area.

The permittee shall maintain records of the following information:

- a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation or due to the facility is closed;
- b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
- c. the dates the control measures were implemented; and



- d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days control measures were required but not implemented.

The information above shall be kept separately for each landfill fugitive dust operation/source identified above, and shall be updated on calendar quarter basis within 30 days after the end of each calendar quarter.

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

e) Reporting Requirements

- (1) The permittee shall submit semiannual reports and such other notifications and reports to Ohio EPA, Northeast District Office as required pursuant to 40 CFR Part 60, Subpart WWW, including the following sections:

60.757(a)	Initial and amended design capacity reporting
60.757(b)	NMOC emission rate reporting
60.757(c)	Collection and control system design plan reporting
60.757(d)	Closure report reporting
60.757(e)	Control equipment removal reporting
60.757(f)	Active collection system reporting
60.758(c)	Recordkeeping for control device parametric monitoring deviations

- (2) The permittee shall comply with the applicable reporting requirements under 40 CFR Part 63, Subpart AAAA, including the following sections:

63.1980(a)	Semiannual reports according to 40 CFR 60, subpart WWW
63.1980(b)	Reporting according to 40 CFR 63 and Table 1, NESHAP General Provisions, of this subpart including SSM plan requirements

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

- a. each day during which an fugitive dust inspection was not performed by the required frequency;
- b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

- (4) The permittee shall submit annual reports that include:

- a. the actual organic-containing waste acceptance per waste code, in tons per year;

- b. the actual non-organic containing waste acceptance per waste code, in tons per year;
- c. the total waste acceptance, in tons per year; and
- d. the total VOC emissions, and LandGEM inputs and output files, updated for the previous year's waste receipts.

Submitting the complete Fee Emission Report, including the LandGEM input and output files, in a timely manner will satisfy the annual report requirement in e)(4)c above.

f) Testing Requirements

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

a. Emission Limitation:

Visible emissions of non-asbestos fugitive dust (load-in and wind erosion) from this emissions unit shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with USEPA Reference Method 9 as set forth in "Appendix A on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraph (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03(B)(3).

b. Emission Limitation:

Fugitive VOC emissions from the landfill shall not exceed 57.5 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated based on the following equation:

$$E = F \times 39 \% \times (1 - PC)$$

where:

E = emissions of fugitive VOC, in tpy;

F = total flowrate of NMOC at peak year of 2048, as predicted by LANDGEM model, 589.5 tpy;

39% = the fractional portion of VOC in NMOC according to AP-42, Section 2.4 MSD Landfills, Table 2.4-2; and

PC = estimated fractional capture efficiency of NMOC by collection/control system, assumed to be 75%.

The LANDGEM model annual waste acceptance rate was limited to 1,600,000 tons per year.

c. Emission Limitation:

Fugitive PE from the landfill shall not exceed 12.4 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equations from AP-42, Section 13.2.4 Aggregate Handling and Storage Piles.

$$E_t = E_1 + E_2$$

where:

$E_t$  = total fugitive particulate emissions from landfill, in tpy;

$E_1$  = emissions from landfill operations, in tpy; and

$E_2$  = emission from wind erosion, in tpy.

$$E_1 = k \times 0.0032 [(U/5)^{1.3}/(M/2)^{1.4}] \times T / 2,000$$

where:

U = mean wind speed, mph (assumed 10);

M = material moisture content, % (per Table 13.2.4-1, M=12);

0.0032 = equation constant;

k = particle size multiplier, size 30 microns (0.74);

T = tonnage handled, no more than 4,015,000 tons/yr; and

2,000 = lbs/ton;

$$E_2 = [1.7 \times (s/1.5) \times [(365-p)/235] \times (f/15)] \times A \times (365 / 2,000) \times (1 - CE)$$

where:

s = silt content, % (per Table 13.2.4, s= 9%);

p = # of days with <0.01 inch of precipitation (per Figure 13.2.2-1, p=150 days);

f = % of time wind speed exceeds 12 mph, % (assume 20);

A = area of landfill that is actively being worked, no more than 10 acres;

365 = days/year;

2,000 = lbs/ton; and

CE = fractional control efficiency (0.50).

d. Emission Limitations:

CO emissions shall not exceed 0.15 lb/mmBtu, 27.0 lbs/hr and 118.3 tons per year from each enclosed combustor.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 10.

Alternatively, compliance shall be demonstrated by the manufacturer's CO emission factor for this combustor of 0.15 lb/mmBtu.

The tpy emission limitation was developed by multiplying the short-term allowable CO emission limitation (27.0 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

e. Emission Limitations:

NO<sub>x</sub> emissions shall not exceed 0.06 lb/mmBtu, 10.8 lbs/hr and 47.3 tons per year from each enclosed combustor.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 7 or 7E.

Alternatively, compliance shall be demonstrated by the manufacturer's NO<sub>x</sub> emission factor for this combustor of 0.06 lb/mmBtu.

The tpy emission limitation was developed by multiplying the short-term allowable NO<sub>x</sub> emission limitation (10.8 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

f. Emission Limitations:

SO<sub>2</sub> emissions shall not exceed 2.8 lbs/hr and 12.3 tons per year from each enclosed combustor.

Applicable Compliance Method:

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

Compliance with the short term emission limitation shall be calculated by the equation below:

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$$E = [(Q \times (46.9 \text{ ppmv} / 1,000,000 \text{ MMscf/scf}) \times (64.066 \text{ molecular weight of SO}_2)) / (386 \text{ scf/lb-mol LFG})] \times (60 \text{ min/hr})$$

where:

E = emission rate, in pound per hour;

Q = actual landfill gas flow rate to the flare, i.e., 6000 scfm maximum;

46.9 ppmv = sulfur concentration in landfill gas from AP-42, Section 2.4 MSW Landfills; and

386 = the mass volume of landfill gas, in scf/lb-mol.

The tpy emission limitation was developed by multiplying the short-term allowable SO<sub>2</sub> emission limitation (2.8 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

g. Emission Limitations:

PM<sub>10</sub> emissions shall not exceed 3.2 lbs/hr and 14.0 tons per year from each enclosed combustor.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with the methods and procedures specified on 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 5 or 201A and 202.

The tpy emission limitation was developed by multiplying the short-term allowable PM<sub>10</sub> emission limitation (3.2 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

h. Emission Limitation:

VOC emissions shall not exceed 0.37 lb/hr from each enclosed combustor.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25 or 25A.

Compliance with the short term emission limitation shall be calculated by the equations below:

$$E = [(Q \times (595^* \text{ ppmv}/1,000,000 \text{ MMscf/scf} \times 39 \text{ percent}) \times (86.18 \text{ molecular weight of NMOC as hexane})) / (386 \text{ scf/lb-mol LFG})] \times [(60 \text{ min/hr})(1-.98)]$$

where:

E = emission rate, in pound per hour;

Q= actual landfill gas flow rate to the flare, i.e., 6000 scfm maximum;

595 ppmv = default NMOC concentration in landfill gas from AP-42, Section 2.4 MSW Landfills;

39% = the fractional portion of VOC in NMOC according to AP-42, Section 2.4 MSD Landfills, Table 2.4-2;

386 = the mass volume of landfill gas, in scf/lb-mol; and

98% = is the minimum destruction efficiency of the control device.

i. Emission Limitation:

Visible particulate emissions from the stacks serving enclosed combustors Flare-100 and Flare-150 shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon visible emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

j. Emission Limitation:

CO emissions shall not exceed 0.37 lb/mmBtu from the candlestick flare.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be demonstrated by the CO emission factor of 0.37 lb/mmBtu from AP-42, Section 13.5 Industrial Flares, Table 13.5-1.

k. Emission Limitation:

NO<sub>x</sub> emissions shall not exceed 0.068 lb/mmBtu from the candlestick flare.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be demonstrated by the NO<sub>x</sub> emission factor of 0.068 lb/mmBtu from AP-42, Section 13.5 Industrial Flares, Table 13.5-1.

l. Emission Limitation:

SO<sub>2</sub> emissions shall not exceed 0.467 lb/hr from the candlestick flare.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be calculated by the equation below:

$$E = [(Q \times (46.9 \text{ ppmv} / 1,000,000 \text{ MMscf/scf}) \times (64.066 \text{ molecular weight of SO}_2) / (386 \text{ scf/lb-mol LFG})] \times (60 \text{ min/hr})$$

where:

E = emission rate, in pound per hour;

Q = actual landfill gas flow rate to the flare, i.e., 1000 scfm maximum;

46.9 ppmv = sulfur concentration in landfill gas from AP-42, Section 2.4 MSW Landfills; and

386 = the mass volume of landfill gas, in scf/lb-mol.

m. Emission Limitation:

PM<sub>10</sub> emissions shall not exceed 0.51 lb/hr from the candlestick flare.

Applicable Compliance Method:

Compliance with the short term emission limitation may be calculated by the equation below:

$$E = EF \times Q \times PM \times 60$$

where:

E = emission rate, lb/hr;

EF = emission factor from AP-42, Section 2.4 MSW Landfills (11/98), 17 lbs/10<sup>6</sup> ft<sup>3</sup> of CH<sub>4</sub>;

Q = flow rate of combustor, scfm;

PM = fractional portion of LFG that is CH<sub>4</sub>, 0.50; and

60 = conversion factor, minute/hour.

n. Emission Limitation:

VOC emissions shall not exceed 0.062 lb/hr from the candlestick flare.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be calculated by the equation below:

$$E = [(Q \times (595^* \text{ ppmv}/1,000,000 \text{ MMscf/scf} \times 39 \text{ percent}) \times (86.18 \text{ molecular weight of NMOC as hexane})/(386 \text{ scf/lb-mol LFG})] \times [(60 \text{ min/hr})(1 - 0.98)]$$

where:

E = emission rate, in pound per hour;

Q = actual landfill gas flow rate to the flare, i.e., 1000 scfm maximum;

595 ppmv = default NMOC concentration in landfill gas from AP-42, Section 2.4 MSW Landfills;

39% = the fractional portion of VOC in NMOC according to AP-42, Section 2.4 MSD Landfills, Table 2.4-2;

386 = the mass volume of landfill gas, in scf/lb-mol; and

98 % = is the minimum destruction efficiency of the control device.

o. Emission Limitation:

There shall be no visible particulate emissions from the candlestick flare, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

Applicable Compliance Method:

Compliance with the visible emissions limitation shall be determined in accordance with U.S. EPA Method 22 in Appendix A of 40 CFR Part 60. The observation period is 2 hours and shall be used according to Method 22.

p. Emission Limitation:

The total VOC emissions from the landfill and control systems shall not exceed 249 tons per year.

Applicable Compliance Method:

Compliance with the annual VOC limitation shall be determined by use of US EPA LandGEM, the most recent emission test results demonstrating the enclosed combustor flare capacity, and the VOC emission factor in AP-42 Section 13.5 Industrial Flares, Table 13.5-1 for the candle flare.



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- (2) The permittee shall comply with the applicable testing requirements required under 40 CFR Part 60, Subpart WWW, including the following sections:

60.754(d)	Flare Performance test methods
60.754(e)	Net heating value for performance test
60.755(d)	Surface monitoring instrumentation specifications and procedures

g) **Miscellaneous Requirements**

- (1) The permittee shall comply with the applicable requirements required under 40 CFR Part 60, Subpart WWW, including the following sections:

60.754(c)	PSD applicability
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