



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION
LUCAS COUNTY**

CERTIFIED MAIL

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov.
Center

Application No: 04-01190

DATE: 12/4/2001

City of Toledo - Hoffman Rd. Landfill
Alan Ruffell
4545 Hoffman Rd.
Toledo, OH 43614

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 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. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

TDES



**Permit To Install
Terms and Conditions**

**Issue Date: 12/4/2001
Effective Date: 12/4/2001**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 04-01190

Application Number: 04-01190
APS Premise Number: 0448011576
Permit Fee: **\$100**
Name of Facility: City of Toledo - Hoffman Rd. Landfill
Person to Contact: Alan Ruffell
Address: 4545 Hoffman Rd.
Toledo, OH 43614

Location of proposed air contaminant source(s) [emissions unit(s)]:
**4545 Hoffman Rd.
Toledo, Ohio**

Description of proposed emissions unit(s):
**Municipal solid waste landfill expansion, addition of gas collection and disposal system (Flare),
modification to Permit to Install issued September 29, 1999.**

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source(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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS**A. State and Federally Enforceable Permit To Install General Terms and Conditions****1. Monitoring and Related Recordkeeping 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:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. 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:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. 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 appropriate Ohio EPA District Office or local air agency. The written 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. See B.10 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., 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.
- iv. 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.

2. 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 appropriate Ohio EPA District Office or local air agency 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).

3. 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.

4. 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.

5. Severability Clause

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

declared invalid.

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. 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 this Permit To Install.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are

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

9. Compliance Requirements

- a. 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.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. 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.
 - ii. 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.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. 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.

10. Source Operation and Operating Permit Requirements After Completion of Construction

- a. If 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).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

B. State Only Enforceable Permit To Install General Terms and Conditions**1. Compliance Requirements**

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements Related to Monitoring and Recordkeeping 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 appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (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 appropriate Ohio EPA District Office or local air agency. 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.)

3. Permit Transfers

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

4. 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.

5. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. 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.

6. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. 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 the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install 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.

7. 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.

8. 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).

9. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

10. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

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.

C. Permit To Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)
 TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
PM	6.18
PM10	24.4
Methane	3,653
NMOC	21.2
VOC	8.3
Chlorine	0.63
HC1	0.036
SO2	3.53
NO2	10.24
CO	189.1

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

1. The permittee shall not cause or allow any open burning in violation of OAC rule 3745-19.

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Paved roadways and parking areas	OAC rule 3745-17-07 (B)(4)	No visible particulate emissions except for a period of time not to exceed six minutes during any sixty-minute observation period for any paved roadway or parking area
	OAC rule 3745-17-08 (B), (B)(8), (B)(9)	Reasonably available control measures to minimize or eliminate visible particulate emissions of fugitive dust (see A.I.2.c. through A.I.2.j.)
Unpaved roadways and parking areas	OAC rule 3745-17-07 (B)(5)	No visible particulate emissions except for a period of time not to exceed thirteen minutes during any sixty-minute observation period for any unpaved roadway or parking area
	OAC rule 3745-17-08 (B), (B)(2)	Reasonably available control measures to minimize or eliminate visible particulate emissions of fugitive dust (see A.I.2.c. through A.I.2.j.)

2. Additional Terms and Conditions

- 2.a The paved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:

paved roadways: entrance roads (Area B)

paved parking areas: employee parking area and area around building (Area A) future parking area (Area E)

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- 2.b** The unpaved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:
- unpaved roadways: haul road to disposal area (Area C)
- unpaved parking areas: small hauler's drop off area (Area D)
- 2.c** The permittee shall employ reasonably available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the paved roadways and parking areas by sweeping and flushing with water at sufficient frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.d** The permittee shall employ reasonably available control measures on the unpaved shoulders of all paved roadways for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved shoulders of all paved roadways with water and/or any other suitable dust suppression chemicals at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.e** The permittee shall employ reasonably available control measures on all unpaved roadways for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved roadways with water and/or any other suitable dust suppression chemicals at treatment sufficient frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.f** The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall no be necessary for a paved or unpaved roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

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- 2.g Any unpaved roadway, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled with the control measure(s) specified above for paved surfaces. Any unpaved roadway that takes the characteristics of a paved roadway due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways. Any unpaved roadway that is paved shall be subject to the visible emission limitation for paved roadways.
- 2.h The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.
- 2.i Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.
- 2.j Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-17-08.

II. Operational Restrictions

- 1. When a dust suppressant is used for controlling fugitive dust from the unpaved road segments and parking areas, the following restrictions shall be followed:
 - a. The permittee shall certify or possess certification that all dust suppressants used to control fugitive dust meet the PCB limitations set forth in 40 CFR 761, and that there are no listed hazardous wastes or characteristic hazardous wastes as set forth in 40 CFR 261.
 - b. The permittee shall not apply used oil as defined by OAC rule 3745-279-01(A)(12) as a dust suppressant.
 - c. The dust suppressant shall be applied in such a manner as to prevent pollution of waters of the State as required by the Ohio Revised Code, section 6111.

III. Monitoring and/or Recordkeeping Requirements

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

<u>paved roadways and parking areas</u>	<u>minimum inspection frequency</u>
all	daily
<u>unpaved roadways and parking areas</u>	<u>minimum inspection frequency</u>

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all

daily

2. The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.
3. The permittee may, upon receipt of written approval from the Toledo Division of Environmental Services (TDOES), modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements. Such modified inspection frequencies would not be considered a minor or significant modification that would be subject to the Title V permit modification requirements in paragraphs (C)(1) and (C)(3) of OAC rule 3745-77-08.
4. 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;
 - 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 where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in 4.d. shall be kept separately for (i) the paved roadways and parking areas and (ii) the unpaved roadways and parking areas, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

IV. Reporting Requirements

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

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- a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
 - b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.
2. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

V. Testing Requirements

Compliance shall be determined through the monitoring and record keeping requirements of section A III. If required, compliance shall also be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources") as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03. Alternate, equivalent methods may be used upon approval by TDOES.

VI. Miscellaneous Requirements

None

Modification Issued: 12/4/2001

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Paved roadways and parking areas	OAC rule 3745-31-05(A)(3)	<p>No visible particulate emissions except for a period of time not to exceed one minute during any sixty-minute observation period for any paved roadway or parking area</p> <p>Best available control measures that are sufficient to minimize or eliminate visible particulate emissions of fugitive dust (see A.I.2.c. through A.I.2.j.)</p>
Unpaved roadways and parking areas	OAC rule 3745-31-05(A)(3)	<p>No visible particulate emissions except for a period of time not to exceed three minutes during any sixty-minute observation period for any unpaved roadway or parking area</p> <p>Best available control measures that are sufficient to minimize or eliminate visible particulate emissions of fugitive dust (see A.I.2.c. through A.I.2.j.)</p> <p>5.1 TPY PM₁₀ total for all paved and unpaved roadways and parking areas</p>

Modification Issued: 12/4/2001**2. Additional Terms and Conditions**

- 2.a** The permittee shall meet the requirements of the additional terms and conditions specified in Section A.I.2. of this permit for purposes of complying with the state enforceable emission limitations and control requirements.
- 2.b** Implementation of the control measures in accordance with the terms and conditions specified in Section A.I.2. of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05.

II. Operational Restrictions

1. The permittee shall comply with the operational restrictions in Section A.II. of this permit for purposes of complying with the state enforceable emission limitations and control requirements.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall comply with the monitoring and/or recordkeeping specified in Section A.III. of this permit for purposes of complying with the state enforceable emission limitations and control requirements.

IV. Reporting Requirements

1. The permittee shall comply with the reporting requirements in Section A.IV. of this permit for purposes of complying with the state enforceable emission limitations and control requirements.

V. Testing Requirements

1. Compliance with the emission limitation(s) of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation

No visible particulate emissions except for a period of time not to exceed one minute during any sixty-minute observation period for any paved roadway or parking area. No visible particulate emissions except for a period of time not to exceed three minutes during any sixty-minute observation period for any unpaved roadway or parking area.

Applicable Compliance Method

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Compliance shall be determined through the monitoring and record keeping requirements of section A III. If required, compliance shall also be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources") as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03. Alternate, equivalent methods may be used upon approval by TDOES.

b. Emission Limitation

5.1 TPY PM₁₀

Applicable Compliance Method

Emission limitations were developed by applying a 70% control efficiency for dust suppression to a maximum potential uncontrolled emission rate of 6.4 TPY PM₁₀ for unpaved roadways and parking areas and 10.8 TPY PM₁₀ for paved roadways and parking areas based on AP-42 emission factors for paved roadways Section 13.2.1 (dated 10/97) and unpaved roadways Section 13.2.2 (dated 9/98). Compliance shall be demonstrated through the monitoring and recordkeeping requirements in Section A.III. of this permit.

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Load-in and load-out of storage piles (see Section A.2.a. for identification of storage piles)	OAC rule 3745-17-07 (B)(6)	No visible emissions except for thirteen minutes in any hour
	OAC rule 3745-17-08 (B), (B)(6)	Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.I.2.b., A.I.2.c. and A.I.2.f.)
Wind erosion from storage piles (see Section A.2.a. for identification of storage piles)	OAC rule 3745-17-07 (B)(6)	No visible emissions except for thirteen minutes in any hour
	OAC rule 3745-17-08 (B), (B)(6)	Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.I.2.b., A.I.2.c. and A.I.2.f.)

2. Additional Terms and Conditions

- 2.a The storage piles that are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08 are listed below:

- all overburden storage piles
- all clay storage piles
- all stone storage piles

- 2.b The permittee shall employ reasonably available control measures on all load-in and load-out operations associated with the storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the

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permittee's permit application, the permittee has committed to maintaining adequate moisture in loads prior to dumping to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 2.c** The above-mentioned control measure(s) shall be employed for each load-in and load-out operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary.
- 2.d** The permittee shall employ reasonably available control measures for wind erosion from the surfaces of all storage piles 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 maintaining adequate moisture in piles to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.e** The above-mentioned control measure(s) shall be employed for wind erosion from each pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measure(s) shall not be necessary for a storage pile 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.
- 2.f** Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. Except as otherwise provided in this section, the permittee shall perform inspections of each load-in operation at each storage pile in accordance with the following frequencies:

storage pile identification

minimum load-in inspection frequency

all

daily

2. Except as otherwise provided in this section, the permittee shall perform inspections of each load-out operation at each storage pile in accordance with the following frequencies:

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storage pile identification

minimum load-out inspection frequency

all

daily

- 3. Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from pile surfaces associated with each storage pile in accordance with the following frequencies:

storage pile identification

minimum wind erosion inspection frequency

all

daily

- 4. No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile is covered with snow and/or ice and for any storage pile activity if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.
- 5. The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for load-in and load-out of a storage pile, and wind erosion from the surface of a storage pile. The inspections shall be performed during representative, normal storage pile operating conditions.
- 6. The permittee may, upon receipt of written approval from the Toledo Division of Environmental Services (TDOES), modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements. Such modified inspection frequencies would not be considered a minor or significant modification that would be subject to the Title V permit modification requirements in paragraphs (C)(1) and (C)(3) of OAC rule 3745-77-08.
- 7. 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;
 - 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, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure(s).

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The information required in 7.d. shall be kept separately for (i) the load-in operations, (ii) the load-out operations, and (iii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

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IV. Reporting Requirements

1. The permittee shall submit deviation reports that identify any of the following occurrences:
 - a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
 - b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.
2. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

V. Testing Requirements

Compliance shall be determined through the monitoring and record keeping requirements of section A III. If required, compliance shall also be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources") as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03. Alternate, equivalent methods may be used upon approval by TDOES.

VI. Miscellaneous Requirements

None

Modification Issued: 12/4/2001**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Load-in and load-out of storage piles (see Section A.2.a. for identification of storage piles)	OAC rule 3745-31-05(A)(3)	No visible emissions except for one minute in any hour Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.I.2.b., A.I.2.c. and A.I.2.f.)
Wind erosion from storage piles (see Section A.2.a. for identification of storage piles)	OAC rule 3745-31-05(A)(3)	No visible emissions except for one minute in any hour Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.I.2.b., A.I.2.c. and A.I.2.f.) 7.4 TPY PM ₁₀

2. Additional Terms and Conditions

- 2.a The permittee shall meet the requirements of the additional terms and conditions specified in Section A.I.2. of this permit for purposes of complying with the state enforceable emission limitations and control requirements.
- 2.b Implementation of the control measures in accordance with the terms and conditions specified in Section A.I.2. of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05.

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II. Operational Restrictions

1. The permittee shall comply with the operational restrictions in Section A.II. of this permit for purposes of complying with the state enforceable emission limitations and control requirements.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall comply with the monitoring and/or recordkeeping specified in Section A.III. of this permit for purposes of complying with the state enforceable emission limitations and control requirements.

IV. Reporting Requirements

1. The permittee shall comply with the reporting requirements in Section A.IV. of this permit for purposes of complying with the state enforceable emission limitations and control requirements.

V. Testing Requirements

1. Compliance with the emission limitation(s) of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation

No visible particulate emissions except for a period of time not to exceed one minute in any one hour for any load-in and load-out of storage piles. No visible particulate emissions except for a period of time not to exceed one minute during any hour for any wind erosion from storage piles.

Applicable Compliance Method

Compliance shall be determined through the monitoring and record keeping requirements of section A III. If required, compliance shall also be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources") as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03. Alternate, equivalent methods may be used upon approval by TDOES.

- b. Emission Limitation

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7.4 TPY PM₁₀**Applicable Compliance Method**

Emission limitations were developed by applying a 50% control efficiency for dust suppression during load-in and load-out to a maximum potential uncontrolled emission rate of 0.057 TPY PM₁₀ and a 50% control efficiency for dust suppression for wind erosion to a maximum potential uncontrolled emission rate of 14.75 TPY PM₁₀ based on OEPA RACM document emission factors Section 2.1.2 (dated 8/83) and AP-42 emission factors for industrial wind erosion Section 13.2.5.(dated 1/95). Compliance shall be demonstrated through the monitoring and recordkeeping requirements in Section A.III. of this permit.

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VI. Miscellaneous Requirements

None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
MSW landfill equipped with an active gas collection and control system (open flare)	OAC rule 3745-17-07(B)(1)	Visible fugitive particulate emissions shall not exceed 20% opacity, as a 3-minute average.
	OAC rule 3745-17-08(B)	Reasonably available control measures to minimize or eliminate visible particulate emissions of fugitive dust (see A.I.2.d. through A.I.2.j.)
	40 CFR Part 60, Subpart WWW	See (A.I.2.a. through A.I.2.c)

2. **Additional Terms and Conditions**

- 2.a The active collection system shall satisfy the following requirements, as specified in 40 CFR Part 60.752(b)(2)(ii)(A):
 - i. The system shall be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment.
 - ii. The system shall collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of 5 years or more if active, or 2 years or more if closed or at final grade.
 - iii. The system shall collect gas at a sufficient extraction rate.

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

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- 2.b** The collected gas shall be vented to an open flare designed and operated as follows:
- i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
 - ii. The flare shall be operated with a flame present at all times.
 - iii. The permittee shall comply with either the requirements in paragraph (a) and (b) or the requirements in paragraph (c):
 - (a) Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined as follows:

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

Where

H_t = net heating value of the sample, MJ/scm; where the net enthalpy per mole of off gas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

k = constant, 1.740×10^{-7} (1/ppm) (g mole/scm) (MJ/kcal)
where the standard temperature for (g mole/scm) is 20 °C.

C_i = concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by American Society for Testing and Materials (ASTM) D1946–77; and

H_i = net heat of combustion of sample component i , kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382–76 if published values are not available or cannot be calculated.

- (b) A steam-assisted and nonassisted flare(s) shall be designed for and operated with an exit velocity of less than 18.3 m/sec. (60 ft/sec), except:

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- (i) steam-assisted and nonassisted flare(s) shall be designed for and operated with an exit velocity of equal to or greater than 18.3 m/sec. (60 ft/sec), but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf); and
- (ii) steam-assisted and nonassisted flare(s) shall be designed for and operated with an exit velocity of less than the velocity, V_{max} , and less than 122 m/sec (400 ft/sec) are allowed; as determined by

$$\text{Log}_{10} (V_{max}) = (Ht + 28.8)/31.7$$

where

 V_{max} = maximum permitted velocity, M/sec,

28.8 = constant

31.7 = constant

Ht = the net heating value as determined in section A.I.2.b.iii.a. above

- (c) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity, V_{max} , as determined by the following equation:

$$V_{max} = (Xh^2 - K1) K2$$

where:

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

K1 = constant, 6.0 volume-percent hydrogen.

K2 = constant, 3.9(m/sec)/volume-percent hydrogen.

Xh² = the volume-percent of hydrogen, on a wet basis, as calculated by using the ASTM Method D1946-77.

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

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

where

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

8.706 = constant

0.7084 = constant

Ht = the net heating value as determined in section A.I.2.b.iii.a. above

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

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- i. The landfill shall be no longer accepting solid waste and be permanently closed (pursuant to 40 CFR Part 258.60).
 - ii. The collection and control system shall have been in operation a minimum of 15 years.
 - iii. As specified in 40 CFR Part 60.754(b), the calculated NMOC gas produced by the landfill shall be less than 55 TPY on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.
- 2.d** The landfill areas that are covered by this permit and subject to the requirements of OAC rule 3745-17-08 are listed below:
- all landfill areas where solid wastes are deposited
 - overburden removal
 - construction of cells
 - construction of haul roads
 - MSW dumping, transfer, compaction and covering
 - bulldozing operations
 - wind erosion
 - closure of cells
- 2.e** The permittee shall employ reasonably available control measures on all landfill operations associated with the landfill cell for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the cell load-in operations with water and/or any other suitable dust suppression chemicals at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.f** The above-mentioned control measures shall be employed for each cell load -in operation of the landfill cell 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 confirms that use of the measures is unnecessary.
- 2.g** The permittee shall employ reasonably available control measures on all surface working operations associated with the landfill cell for the purpose of ensuring compliance with

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the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the surface working operations with water and/or other suitable dust suppression chemicals at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 2.h** The permittee shall employ reasonably available control measures for wind erosion from surfaces associated with the landfill cell for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the landfill surface with water and/or other suitable dust suppression chemicals at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.i** The above-mentioned control measures shall be employed for surface operations and wind erosion from the landfill cell if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measure(s) shall not be necessary for the landfill cell 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.
- 2.j** Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.

II. Operational Restrictions

1. The permittee shall operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for 5 years or more if active, or for 2 years or more if closed or at final grade.
2. The permittee shall operate the collection system with negative pressure at each wellhead except under the following conditions:
 - a. A fire or increased well temperature. (The permittee shall record instances when positive pressure occurs in efforts to avoid a fire.)
 - b. Use of a geomembrane or synthetic cover. (The permittee shall develop acceptable pressure limits in the design plan.)
 - c. A decommissioned well. (A well may experience a static positive pressure after shutdown to accommodate for declining flows. All design changes shall be approved by the Director of Ohio EPA.)
3. The permittee shall operate each interior wellhead in the collection system with a landfill gas

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temperature less than 55 degrees Celsius and with either a nitrogen level less than 20% or an oxygen level less than 5%. The permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

4. The permittee shall operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill.
5. If monitoring demonstrates that the operational requirements in A.II.2. through A.II.4. are not met, corrective action shall be taken as specified in 40 CFR Part 60.752(a)(3) through 40 CFR Part 60.752(a)(5) or 40 CFR Part 60.755(c). If corrective actions are taken as specified in 40 CFR Part 60.755, the monitored exceedance is not a violation of the operational requirements of this section.
6. The permittee shall operate the collection system such that all collected gases are vented to a control system designed and operated in compliance with A.I.2.a. In the event, the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour.
7. The permittee shall operate the flare at all times when the collected gas is routed to the system.
8. A pilot flame shall be maintained at all times in the flare's pilot light burner.
9. The permittee shall not accept or dispose of any "asbestos material" as defined in OAC 3745-20-01, or asbestos-containing waste material as defined in 40 CFR 61.141, containing more than 1 percent asbestos as determined using the methods specified in appendix A, Subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy. The receipt or disposal of any asbestos or asbestos-containing waste without proper approval of the Ohio EPA is a violation of the NESHAPS for asbestos and the Ohio EPA Permit to Install rules.

III. Monitoring and/or Recordkeeping Requirements

1. For the active gas collection system, the permittee shall install a sampling port and a thermometer or other temperature measuring device at each wellhead and record the following information on a monthly basis:
 - a. the gauge pressure in the gas collection header at each individual well;

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- b. the nitrogen or oxygen concentration in the landfill gas; and
 - c. the temperature of the landfill gas.
2. The permittee shall monitor surface concentrations of methane on a quarterly basis as follows:
- a. The methane concentration along the entire perimeter of the collection area and along a serpentine pattern spaced 30 meters apart (or a site-specific established spacing) and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover.
 - b. The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.
 - c. Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of Appendix A of 40 CFR Part 60, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.
 - d. Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified below shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements listed in A.II.4.:
 - i. The location of each monitored exceedance shall be marked and the location recorded.
 - ii. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be remonitored within 10 calendar days of detecting the exceedance.
 - iii. If the remonitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the remonitoring shows a third exceedance for the same location, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding time line for installation may be submitted to the Ohio EPA for approval. No further monitoring of that location is required until the action specified has been taken.
 - iv. Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day remonitoring specified above shall be remonitored 1 month from the initial exceedance. If the

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1-month remonitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month remonitoring shows an exceedance, the actions specified above shall be taken.

- v. Pursuant to 40 CFR Part 60.756(f), each permittee seeking to demonstrate compliance with 40 CFR Part 60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in 40 CFR Part 60.755(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.
3. The permittee shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:
 - 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; and
 - b. a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes.
 4. If a gas flow rate measuring device is not installed then the permittee shall 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.
 5. The permittee shall maintain the following information for the life of the control equipment as measured during the initial performance test or compliance demonstration:
 - a. For the purposes of calculating the maximum expected gas generation flow from the landfill to determine compliance with 40 CFR Part 60.752(b)(2)(ii)(A)(1), one of the following equations shall be used. The k and kinetic factors should be those published in the most recent AP-42 or other site specific values demonstrated to be appropriate and approved by the Administrator. If k has been demonstrated as specified in 40 CFR Part 60.754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until

closure.

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

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

where,

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

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

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, per year

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

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

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

$$Q_m = \sum 2k L_o M_i e^{-k t_i} \text{ for } i=1 \text{ through } i=n$$

where,

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

k = methane generation rate constant, per year

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

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

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

- iii. If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in paragraphs A.III.5.i. and ii. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in paragraphs A.III.i. or ii or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment. (The permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Ohio EPA.);

- b. the density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR Part 60.759(a)(1);
- c. the flare type (i.e., steam-assisted, air-assisted, or non-assisted);
- d. all visible emission readings;
- e. heat content determinations of the gas;
- f. flow rate or bypass flow rate measurements

- g. exit velocity determinations made during the performance test as specified in 40 CFR Part 60.18; and
 - h. continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the flare pilot flame or flare flame is absent.
6. The permittee shall properly install, operate, and maintain a device to continuously monitor the flare pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall record the following information each day:

- a. all periods during which there was no pilot flame;
 - b. the downtime for the flare and monitoring equipment when the collection and control system is in operation.
7. The permittee shall maintain, 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.
8. Pursuant to 40 CFR Part 60.758(c)(2), 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, specified in A.III.4.
9. The permittee shall keep for at least 5 years up-to-date, readily accessible, on-site records of the maximum design capacity of the landfill, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either hardcopy or electronic formats are acceptable. These records, may be also required by the OEPA, Division of Solid and Infectious Waste Management, and shall satisfy this permit condition.
10. Except as otherwise provided in this section, the permittee shall perform inspections of the landfill operation areas in accordance with the following frequencies:

<u>landfill areas and operations</u>	<u>minimum inspection frequency</u>
all landfill areas where solid wastes are deposited	daily
overburden removal	daily
construction of cells and haul roads	daily
MSW dumping, transfer, compaction and covering	daily
bulldozing operations	daily
wind erosion	daily

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closure of cells

daily

11. The purpose of the inspections is to determine the need for implementing the above-mentioned control measures for fugitive landfill particulate emissions. The inspections shall be performed during representative, normal operating conditions. No inspection shall be necessary for a landfill operating area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.
12. The permittee may, upon receipt of written approval from the Toledo Division of Environmental Services (TDOES), modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements. Such modified inspection frequencies would not be considered a minor or significant modification that would be subject to the Title V permit modification requirements in paragraphs (C)(1) and (C)(3) of OAC rule 3745-77-08.
13. 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;
 - 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 where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in 13.d. shall be kept separately for each landfill area and operation and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

IV. Reporting Requirements

1. The permittee shall submit annual deviation reports that identify any of the following occurrences:
 - a. each day during which an inspection required by A.III.9. was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation;
 - b. each instance when a control measure required by A.I.2.e., 2.g. and 2.h. that was to be implemented as a result of an inspection, was not implemented;
2. The following shall be reported to the TDOES within one hour after the occurrence, or as soon as reasonably possible:
 - a. any breakdown or malfunction of the landfill gas collection system resulting in the emission of raw landfill gas emissions to the atmosphere,
 - b. Any breakdown or malfunction of the landfill gas control system exceeding one hour resulting in the emission of raw landfill gas emissions to the atmosphere.

Immediate remedial measures shall be undertaken to correct the problem and prevent further emissions to the atmosphere.
3. The permittee shall submit a closure report to the appropriate Ohio EPA District Office and the TDOES within 30 days of waste acceptance cessation. The Ohio EPA may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR Part 258.60. If a closure report has been submitted to the Ohio EPA, no additional wastes may be placed into the landfill without filing a notification of modification as described in 40 CFR Part 60.7(a)(4).
4. The permittee shall submit an equipment removal report to the appropriate Ohio EPA District Office and the TDOES 30 days prior to removal or cessation of operation of the control equipment. The equipment removal report shall contain the information specified in 40 CFR Part 60.757(e)(1). The Ohio EPA may request additional information as may be necessary to verify that all of the conditions for removal in 40 CFR Part 60.752(b)(2)(v) have been met.
5. The permittee shall submit annual deviation reports that identify any of the following occurrences:
 - a. The value and length of time for exceedance of applicable parameters monitored below:
 - i. any record which indicates that the gauge pressure in the gas collection header at each individual well was positive or operated under positive pressure to avoid a fire or increased well temperature;
 - ii. any record which indicates that the nitrogen or oxygen concentration in the landfill gas was greater than 20% or 5%, respectively;

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- iii. any record which indicates that the temperature of the landfill gas was greater than 55 degrees Celsius;
- b. A description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as recorded under A.III.8.
- c. A description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating.
- d. All periods when the collection system was not operating in excess of 5 days.
- e. The location of each exceedance of the 500 parts per million methane concentration as provided in A.II.4. and the concentration recorded at each location for which an exceedance was recorded in the previous month.
- f. The date of installation and the location of each well or collection system expansion added pursuant to 40 CFR Part 60.755(a)(3), (b), and (c)(4).

The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 CFR Part 60.8. Subsequent annual reports shall be submitted by January 31 of each year.

- 6. The permittee shall submit the following information with the initial performance test report required pursuant to 40 CFR Part 60.8:
 - 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 documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;
 - d. the sum of the gas generation flow rate for all areas from which collection wells have been excluded based on nonproductivity and the calculations as specified in 40 CFR Part

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60.755 of gas generation flow rate for each excluded area;

- e. 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
- f. the provisions for the control of off-site migration.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation

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

Applicable Compliance Method

Compliance shall be demonstrated in accordance with Test Method 22 as set forth in "Appendix on Test Methods " in 40 CFR Part 60. Alternate, equivalent methods may be used upon approval by the TDOES.

- b. Emission Limitation

Visible fugitive particulate emissions shall not exceed 20% opacity, as a 3-minute average.

Applicable Compliance Method

Compliance shall be determined through the monitoring and recordkeeping requirements of Section A.III. If required, compliance shall also be determined in accordance with OAC rule 3745-17-03(B)(3).

2. The nitrogen level at each interior wellhead shall be determined using Method 3C of 40 CFR Part 60, Appendix A, unless an alternative test method is established as allowed by 40 CFR Part 60.752(b)(2)(i).
3. The oxygen level at each interior wellhead shall be determined by an oxygen meter using Method 3A of 40 CFR Part 60, Appendix A, unless an alternative test method is established as allowed by 40 CFR Part 60.752(b)(2)(i), except that:
 - a. the span shall be set so that the regulatory limit is between 20 and 50% of the span;
 - b. a data recorder is not required;

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- c. only two calibration gases are required, a zero and span, and ambient air may be used as the span;
- d. a calibration error check is not required; and
- e. the allowable sample bias, zero drift, and calibration drift are plus or minus 10%.

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4. The permittee shall conduct or have conducted, within 90 days after the installation of the collection and control system, an initial performance test to demonstrate that the flare can operate in conformance with the requirements specified in 40 CFR Part 60.18. The net heating value of the gas being combusted in the flare and the actual exit velocity of the flare shall be determined in accordance with the procedures and methods specified in 40 CFR Part 60.18. The visible emission evaluation shall be conducted in accordance with the procedures specified in Section A.V.2.
5. After the installation of a collection and control system in compliance with 40 CFR Part 60.755, the permittee shall calculate the NMOC emission rate for the purposes of determining when the system can be removed as provided in 40 CFR Part 60.752(b)(2)(v) in accordance with the equation and procedures specified 40 CFR Part 60.754(b), (b)(1), and (b)(2). The permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Ohio EPA as provided in 40 CFR Part 60.752(b)(2)(i)(B).

VI. Miscellaneous Requirements

1. Specifications for the active collection and control system design plan as listed in 40 CFR Part 60.752(b)(2)(i) and 60 .759 shall be submitted to the Ohio EPA Northwest District Office for review.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
MSW landfill equipped with an active gas collection and control system (open flare).	OAC rule 3745-31-05(A)(3)	Fugitive Landfill Gas: 20.0 TPY NMOC 3,446 TPY Methane 7.8 TPY VOC 0.6 TPY Cl ₂ Controlled Emissions from Flare: 0.3 lbs NMOC/hr, 1.2 TPY NMOC 47.3 lbs Methane/hr, 207 TPY Methane 0.97 lb PM/hr, 4.25 TPY PM 0.8 lb SO ₂ /hr, 3.53 TPY SO ₂ 2.33 lbs NO _x /hr, 10.24 TPY NO _x 43.2 lbs CO/hr, 189.1 TPY CO 0.01 lb HCl/hr, 0.036 TPY HCl 0.01 lb Cl ₂ /hr, 0.03 TPY Cl ₂
Fugitive Landfill Particulate Emissions	OAC rule 3745-31-05(A)(3)	Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see B.I.2.a. and B.I.2.b.) 1.93 TPY PM 11.9 TPY PM ₁₀

2. Additional Terms and Conditions

- 2.a The permittee shall meet the requirements of the additional terms and conditions specified in Section A.I.2. of this permit for purposes of complying with the state enforceable emission limitations and control requirements.
- 2.b Implementation of the control measures in accordance with the terms and

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conditions specified in Section A.I.2. of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05.

II. Operational Restrictions

1. The permittee shall comply with the operational restrictions in Section A.II. of this permit for purposes of complying with the state enforceable emission limitations and control requirements.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall comply with the monitoring and/or recordkeeping specified in Section A.III. of this permit for purposes of complying with the state enforceable emission limitations and control requirements.

IV. Reporting Requirements

1. The permittee shall comply with the reporting requirements in Section A.IV. of this permit for purposes of complying with the state enforceable emission limitations and control requirements.

V. Testing Requirements

1. Compliance with the emission limitations in Section B.I.1. of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitation

Fugitive Landfill Gas - 20.0 TPY NMOC, 3,446 TPY Methane, 7.8 TPY VOC and 0.6 TPY Cl₂

Applicable Compliance Method

The annual emission limitations represent the maximum potential to emit based on AP-42 emission factors for landfill gas generation Section 2.4 (dated 11/98). Maximum potential emissions will occur in the year 2021 and are based on the following:

- a. maximum daily landfill waste acceptance of 1,500 tons/day
- b. maximum landfill capacity of 10,073,000 tons compacted waste (9.157 x 10⁶ Mg)
- c. NMOC concentration data obtained from AP-42 Section 2.4 (dated 11/98) value of 595

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ppm

- d. an assumed landfill gas collection system efficiency of 75% based on AP-42 Section 2.4 (dated 11/98) factors

Since the annual limitations represent the emission units' maximum potential to emit, no recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with the above limitations.

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2. Emission Limitation

Controlled emissions from Flare (short term), 0.3 lbs NMOC/hr, 47.3 lbs Methane/hr

Applicable Compliance Method

The flare emission limitations (short-term) were developed by applying a 98% reduction efficiency for control with a flare to a maximum calculated flare gas stream of 13.8 lbs NMOC/hr and 2,360 lbs Methane/hr. AP-42 Section 2.4.4 (dated 11/98) emission factors were used to calculate the total uncontrolled methane and NMOCs. A collection efficiency of 98% was used to calculate the amount of methane and NMOCs destroyed. The remainder (207 TPY Methane and 1.2 TPY NMOCs) are emitted over 8760 hrs/yr. Compliance shall be demonstrated by ensuring the flare operates at the proper efficiency through the flare monitoring and recordkeeping specified in Section A.III.

3. Emission Limitation

Secondary Emissions from Flare (short-term)

a. 0.97 lb PM/hr

Applicable Compliance Method

The secondary emission limitation (short-term) represents the maximum potential to emit based on calculations using AP-42 Section 2.4-1 (dated 11/98) emission factors for PM of 270 kg PM/10⁶ dscm methane and a maximum methane flow rate of 1.93 x 10⁷ m³/yr and a conversion of 0.4536 kg/pound and 8760 hrs/yr. Since the above limitation represents the emission units' maximum potential to emit, no recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with the above limitation.

b. 0.8 lb SO₂/hr

Applicable Compliance Method

The secondary emission limitation (short-term) represents the maximum potential to emit based on calculation assuming that all sulfur containing compounds inlandfill gas react to form SO₂. The potential to emit calculations were based on a sulfur compound concentration of 46.9 ppm from AP-42 Section 2.4-1 (dated 11/98) and a maximum gas flow rate to the flare of 1.93 x 10⁷ m³/yr and a conversion of 0.4536 kg/pound and 8760

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hrs/yr. Since the above limitation represents the emission units' maximum potential to emit, no recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with the above limitation.

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- c. 2.33 lb NO_x/hr

Applicable Compliance Method

The secondary emission limitation (short-term) represents the maximum potential to emit based on calculations using AP-42 Section 2.4-1 (dated 11/98) emission factors for PM of 270 kg NO_x/10⁶ dscm methane and a maximum methane flow rate of 1.93 x 10⁷ m³/yr and a conversion of 0.4536 kg/pound and 8760 hrs/yr. Since the above limitation represents the emission units' maximum potential to emit, no recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with the above limitation.

- d. 43.2 lb CO/hr

Applicable Compliance Method

The secondary emission limitation (short-term) represents the maximum potential to emit based on calculations using AP-42 Section 2.4-1 (dated 11/98) emission factors for CO of 12,000 kg CO/10⁶ dscm methane and a maximum methane flow rate of 1.93 x 10⁷ m³/yr and a conversion of 0.4536 kg/pound and 8760 hrs/yr. Since the above limitation represents the emission units' maximum potential to emit, no recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with the above limitation.

- e. 0.01 lb HCl/hr

Applicable Compliance Method

The secondary emission limitation (short-term) represents the maximum potential to emit based on calculations assuming that all chlorine containing compounds collected in landfill gas react to form HCl during combustion in the flare. The potential to emit calculations were based on a chlorine compound concentration of 42.0 ppm from AP-42 Section 2.4-1 (dated 11/98) and a maximum chlorine compound flow rate to the flare of 1.46 x 10³ m³/yr and a conversion of 0.4536 kg/pound and 8760 hrs/yr. Since the above limitation represents the emission units' maximum potential to emit, no recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with the above limitation.

- f. 0.01 lb Cl₂/hr

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Applicable Compliance Method

The secondary emission limitation (short-term) represents the maximum potential to emit based on calculations assuming that all chlorine containing compounds collected in landfill gas react to form HCl during combustion in the flare. AP-42 provides an average capture efficiency of 75% and an estimated control efficiency of (98 % for the flare in Section 2.4 (dated 11/98). B.V.1. estimates the uncontrolled Cl₂ emissions to be 2.3 TPY and the fugitive to be (1-.75) or 0.6 TPY Cl₂. The difference (2.3-0.6 TPY) is the amount of Cl₂ that goes to the flare where 98% is combusted to HCl and the remaining 2% or 0.3 TPY passes through the flare. Conversion of 0.3 TPY Cl₂ to lb/hr Cl₂ utilizes conversion factors of 8760 hrs/yr and 2000 lbs/ton. Since the above limitation represents the emission units' maximum potential to emit, no recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with the above limitation.

4. Emission Limitation

Controlled emissions from Flare (long-term)

a.	1.2 TPY NMOC	e.	10.24 TPY NO _x
b.	207 TPY Methane	f.	189.1 TPY CO
c.	4.25 TPY PM	g.	0.036 TPY HCl
d.	3.53 TPY SO ₂	h.	0.3 TPY Cl ₂

Applicable Compliance Method

The ton/yr limitations were developed by multiplying the lb/hr limitations by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitations, compliance will also be shown with the annual limitations.

5. Emission Limitation

Fugitive Landfill Particulate Emissions: 1.93 TPY PM & 11.9 TPY PM₁₀

Applicable Compliance Method

Emission limitations were developed as follows:

applying a 70% control efficiency for dust suppression to a maximum potential uncontrolled emission rate of 12.35 TPY PM₁₀ for unpaved gravel roadways during construction based on

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AP-42 Section 13.2.2 (dated 9/98) emission factors,

a maximum potential uncontrolled emission rate of 0.03 TPY PM for material handling operations based on AP-42 Section 13.2.4 (dated 1/95) emission factors,

a maximum potential uncontrolled emission rate of 1.9 TPY PM for wind erosion from exposed areas based on AP-42 table 11.9-4 (dated 7/98) emission factors; and

a maximum potential uncontrolled emission rate of 8.2 TPY PM₁₀ for bulldozing operations based on AP-42 table 11.9-1 (dated 7/98) emission factors.

The PM and PM₁₀ limits are summed together based on pollutant.

Compliance Shall be demonstrated through the fugitive dust monitoring and recordkeeping requirements in Section A.III.

VI. Miscellaneous Requirements

None