

Facility ID: 0247000760 Issuance type: Title V Draft Permit

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part III" and before "I. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

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Part II - Specific Facility Terms and Conditions

a State and Federally Enforceable Section

1. This Title 5 facility consists of three separate operations: Lorain County Landfill #1(LCLF1), Lorain County Landfill #2 (LCLF2), and Lorain County Resource Recovery (LCRR). Both of the Lorain County Landfills have collection and control equipment for landfill gas.

Per Engineering Guide # 58 and case history from the USEPA, LCLF1 and LCLF2 are considered to be one landfill. In June 2000 LCLF2 was permitted for a lateral expansion (known as the Northern Expansion). The expansion is considered a modification to the landfill and hence LCLF1 and LCLF2 are now both regulated under Subpart WWW.

The LCRR facility consists of transfer operations where glass, plastic, metals, and paper are separated from each other within an enclosed building.

This permit incorporates Lorain County Landfill #1 and Lorain County Landfill #2 under one emissions unit (F002). The collection and enclosed combustors at each facility have different requirements.

2. There are no soil storage piles at this facility and this permit does not authorize the permittee to establish and maintain soil storage piles at this facility.

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b State Only Enforceable Section

1. The following insignificant emissions units are located at this facility:

T001 - 150,000-Gallon Leachate Storage Tank
T002 - 150,000-Gallon Leachate Storage Tank
G001 - Gasoline Dispensing Operations at Lorain County Landfill #2
G002 - Gasoline Dispensing Operations at Lorain County Resource Recovery
F003 - Compost Storage Pile at Lorain County Resource Recovery
P002 - 750 hp tub grinder located at the Lorain County Resource Recovery
P003 - 362 hp Deutz deisel generator for screening operations located at the Lorain County Resource Recovery
P004 - 60 hp deisel generator for performance blend mixing located at the Lorain County Resource Recovery
P005 - 48 hp 6-inch deisel water pump #1
P006 - 43 hp 4-inch deisel water pump #2
P007 - 48 hp 6-inch deisel water pump #3

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a Permit to Install for the emissions unit.

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0247000760 Emissions Unit ID: F001 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
Landfill Roadways and Parking Areas	OAC rule 3745-31-05 (A)(3) PTI # 02-13577	No visible emissions from any unpaved roadway or unpaved parking area except for a period of time not to exceed three minutes during any sixty-minute observation period.
		No visible emissions from any paved roadway or paved parking area except for a period of time not to exceed one minute during any sixty-minute observation period.
	OAC rule 3745-17-08(B)	Particulate emissions: 34.50 tons per year. This rule does not apply, per OAC 3745-17-08 (A)(1). The emissions unit is not located in an Appendix A area.
	OAC rule 3745-17-07(B)	This rule does not apply, per OAC 3745-17-07 (B)(11) (d). The emissions unit is not located in an Appendix A area.

2. Additional Terms and Conditions

- a. The paved roadways and paved parking areas that are covered by this permit and subject to the requirements of OAC 3745-31-05 are listed below:
 - (a) Paved Roadways
 - All paved roadways at the landfills
 - All paved roadways at the resource recovery facility
 - Paved Parking Areas
 - All paved parking areas at the landfills
 - All paved parking areas at the resource recovery facility
- b. The unpaved roadways and unpaved parking areas that are covered by this permit and subject to the requirements of OAC 3745-31-05 are listed below:
 - Unpaved Roadways
 - All unpaved roadways at the landfills
 - All unpaved roadways at the resource recovery facility
 - Unpaved Parking Areas
 - All unpaved parking areas at the landfills
 - All unpaved parking areas at the resource recovery facility
- c. The permittee shall employ best available control measures on all paved roadways and paved parking

- areas for the purpose of ensuring compliance with the visible emission requirements. In accordance with the permittee's permit application, the permittee has committed to treat the paved roadways and paved parking areas by flushing with water or sweeping at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- d. The permittee shall employ best available control measures on all unpaved roadways and unpaved parking areas for the purpose of ensuring compliance with the visible emission requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved roadways and unpaved parking areas by resurfacing with gravel and/or watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
 - e. 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 not 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 visible emission requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.
 - f. Any unpaved roadway or unpaved parking area, 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 measures specified above for paved surfaces. Any unpaved roadway or unpaved parking area that takes the characteristics of a paved roadway or paved parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and unpaved parking areas. Any unpaved roadway or unpaved parking area that is paved shall be subject to the visible emission limitation for paved roadways and paved parking areas.
 - g. 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.
 - h. 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 established pursuant to OAC rule 3745-31-05.
 - 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.

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II. Operational Restrictions

1. Used oil, as defined by OAC rule 3745-279-01(A)(12), shall not be used as a dust suppressant.

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III. Monitoring and/or Record Keeping Requirements

1. Except as otherwise provided in this section, the permittee shall perform inspections of each of the paved and unpaved roadway segments and each parking area in accordance with the following frequencies:
 - Unpaved roadways and parking areas minimum inspection frequency
 - All unpaved roadways and parking areas daily
 - Paved roadways and parking areas minimum inspection frequency
 - All paved roadways and parking areas 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 Ohio EPA, Northeast District Office, 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.
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 paved parking areas and (ii) the unpaved roadways and unpaved parking areas, 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 quarterly 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.

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V. Testing Requirements

1. Compliance with the visible emission limitation for the paved and unpaved roadways and paved and unpaved parking areas identified above shall 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.
2. Emission Limit: Particulate emissions shall not exceed 34.50 tons per year.

Applicable Compliance Method: Compliance shall be determined by the following equations as they appeared in AP-42 sections 13.2.1 and 13.2.2, paved roads and unpaved roads versions 1/96 and 9/98, respectively:

Unpaved Roadways and Unpaved Parking Areas

$$E = \{[k \times (s/12)0.8 \times (W/3)0.5]/(M0.2)0.4\} \times [(365-p)/365] \times VMT/2000 \text{ where,}$$

E = emission rate (tons per year)
 k = coefficient for particulate emissions, (10)
 s = silt content (6.4%), Table 13.2.2-1
 W = average vehicle weight (tons)
 M = moisture content (0.2), default
 p = number of days with at least 0.01 inches of precipitation per year (150)
 VMT = vehicular miles traveled (miles per year)
 2000 = conversion factor (pounds per ton)

Paved Roadways and Paved Parking Areas

$$E = k \times (sL/2)0.65 \times (W/3)1.5 \times VMT/2000 \text{ where,}$$

E = emission rate (tons per year)
 k = emission factor for particulate emissions, (0.082 pound per VMT)
 sL = silt loading, 7.4 g/m²
 W = average vehicular weight, tons
 VMT = vehicular miles traveled (miles per year)
 2000 = conversion factor (pounds per ton)

The total emission rate shall be calculated by adding the emission rates (tons per year) from the unpaved roadways and parking areas and paved roadways and parking areas.

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VI. Miscellaneous Requirements

1. None

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B. State Enforceable Section

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

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
2. Additional Terms and Conditions		
1. None		

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Facility ID: 0247000760 Emissions Unit ID: F002 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
Landfill Operations at Lorain County Landfill #1 and Lorain County Landfill #2.	OAC rule 3745-31-05 (A)(3) PTI # 02-13577	Visible emissions of fugitive dust from the landfill operations unit shall not exceed 10 percent opacity as a six-minute average. Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. (See sections A.1.2.a through A.1.2.f.)
	OAC rule 3745-17-08(B)(6)	Particulate emissions: Total of 3.10 tons per year from all the landfill operations excluding the enclosed combustors. This rule does not apply, per OAC 3745-17-08(A)(1). The emissions unit is not located in an Appendix A area.
	OAC rule 3745-17-07(B)(1)	This rule does not apply, per OAC 3745-17-07(B)(11). The emissions unit is not located in an Appendix A area.
Enclosed Combustor for Landfill #2	OAC rule 3745-31-05 (A)(3) PTI 02-13577	Visible particulate emissions from this enclosed combustor shall not exceed 10 percent opacity as a six-minute average.
		Oxides of nitrogen emissions shall not exceed 8.19 pounds per hour; 35.9 tons per year.
		Sulfur dioxide emissions shall not exceed 3.70 pounds per hour; 16.20 tons per year.
		Carbon monoxide emissions shall not exceed 32.75 pounds per hour; 143.5 tons per year.
		Hydrogen chloride emissions shall not exceed 8.04 pounds per hour; 35.20 tons per year.
		Particulate emissions shall not exceed 2.69 pounds per hour; 11.8 tons per year.
		Non-methane organic compound emissions shall not exceed 3.19 pounds per hour; 14.0 tons per year. See section A.1.2.g through A.1.2.j
Enclosed Combustor for Landfill #1	40 CFR Part 60, Subpart WWW OAC rule 3745-31-05 (A)(3) PTI 02-8381	Particulate emissions shall not exceed 1.20 pounds per hour; 5.26 tons per year.
		Sulfur dioxide emissions shall not exceed 0.98 pound per hour; 4.30 tons per year.
		Non-methane organic compound emissions shall not exceed 3.19 pounds per hour; 14.0 tons per year.
		Oxides of nitrogen emissions shall not exceed 5.46 pounds per hour; 23.91 tons per year.
		Carbon monoxide emissions shall not exceed 21.84 pounds per hour; 95.64 tons per year.
		Hydrogen chloride emissions shall not exceed 2.02

pounds per hour; 8.87 tons per year.

40 CFR Part 60, Subpart WWW

See section A.I.2.g through A.I.2.j

2. Additional Terms and Conditions

- a. The landfill areas that are covered by this permit and subject to the requirements of OAC 3745-31-05 are listed below:

(a)

Landfill area permitted under DSIWM permit number 02-1170 and permit number 02-8972; also known as Lorain County Landfill #2

Landfill area known as Lorain County Landfill #1, closure date of May 31, 1985

- b. The permittee shall employ best available control measures on all landfill operations associated with the load-in of municipal solid waste (MSW) 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 the watering of dusty materials, either prior to dumping or during dumping, and good operating practices to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- c. The above-mentioned control measures shall be employed for each MSW 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.
- d. The permittee shall employ best available control measures for wind erosion from the surface of the landfill 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 watering the landfill surface, as necessary, to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- e. The above-mentioned control measures shall be employed for wind erosion from the landfill if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure is necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measure 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.
- 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 3745-31-05.
- g. The active collection system for Lorain County Landfill #1 and Lorain County Landfill #2 shall satisfy the following requirements, as specified in 40 CFR Part 60.752(b)(2)(ii)(A):
- 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.
 - The system shall collect gas from each area, cell, or group of cells in the landfill in which the initial 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.
 - The system shall collect gas at a sufficient extraction rate.
 - The system shall be designed to minimize off-site migration of subsurface gas.
- h. For Lorain County Landfill #1 and Lorain County Landfill #2, the collected gas shall be vented to an enclosed combustor designed and operated as follows:
- The enclosed combustor shall either reduce non-methane organic compounds (NMOC) by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at three percent oxygen.
- i. or Lorain County Landfill #1 and Lorain County Landfill #2, 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:
- The landfill shall be no longer accepting solid waste and be permanently closed (pursuant to 40 CFR Part 258.60).
 - The collection and control system shall have been in operation a minimum of 15 years.
 - The calculated NMOC gas produced by the landfill shall be less than 55 tons per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

- j. For Lorain County Landfill #1 and Lorain County Landfill #2, each landfill gas well shall be installed within 60 days of the date in which the initial solid waste has been in place for a period of:
 - i. 5 years or more if active; or
 - ii. 2 years or more if closed or at final grade.

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II. Operational Restrictions

1. There shall be no open burning, in violation of OAC Chapter 3745-19, at this facility.
2. The permittee shall not accept or dispose of any friable asbestos or friable asbestos-containing materials. The receipt of any friable asbestos or friable asbestos containing waste without proper approval of the Ohio EPA is a violation of the NESHAP for Asbestos (40 CFR 61, Subpart M) and OAC Chapter 3745-31.
3. For Lorain County Landfill #1 and Lorain County Landfill #2 the permittee shall operate the collection systems such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been placed for 5 years or more if active, or for 2 years or more if closed or at final grade.
4. For Lorain County Landfill #1 and Lorain County Landfill #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 Northeast District Office of the Ohio EPA.)
5. For Lorain County Landfill #1 and Lorain County Landfill #2, the permittee shall operate each interior wellhead in the collection system with a landfill gas temperature less than 55 degrees Centigrade and either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. 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 methogens.

If a well exceeds one of these parameters, action shall be initiated to correct the exceedance within 15 calendar days. If the correction can not be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance, unless the reason for the exceedance is listed above in section A.II.2 of this permit.
6. For Lorain County Landfill #1 and Lorain County Landfill #2, 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.
7. For Lorain County Landfill #1 and Lorain County Landfill #2, the permittee shall operate the collection system such that all collected gases are vented to a control system designed and operated in compliance with section A.I.2.h of this permit. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour.
8. For Lorain County Landfill #1 and Lorain County Landfill #2, the permittee shall operate the enclosed combustion device at all times when the collected gas is routed to the system.
9. The average combustion temperature, for the Lorain County Landfill #2 enclosed combustor, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1370 degrees Fahrenheit.
10. For Lorain County Landfill #2, the total quantity of landfill gas burned in the enclosed combustor shall not exceed 3000 standard cubic feet per minute.
11. For Lorain County Landfill #1, the total quantity of landfill gas burned in the enclosed combustor shall not exceed 2000 standard cubic feet per minute.
12. The average combustion temperature, for the Lorain County Landfill #1 enclosed combustor, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1400 degrees Fahrenheit.

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III. Monitoring and/or Record Keeping Requirements

1. Except as otherwise provided in this section, the permittee shall perform inspections of each load-in operation at each MSW landfill cell in accordance with the following frequencies:
 - Landfill Cell Identification Minimum load-in inspection frequency
 - all active cells daily
2. Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from

MSW landfill cell surfaces in accordance with the following frequencies:

Landfill Cell Identification Minimum Wind Erosion Inspection Frequency

all active cells daily
all closed cells monthly

3. The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for load-in of a MSW landfill cell and wind erosion from the surface of a MSW landfill cell. The inspections shall be performed during representative, normal landfill operating conditions.
4. No inspection shall be necessary for wind erosion from the surface of a MSW landfill cell when the cell is covered with snow and/or ice and for any landfill cell 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-mentioned 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 permittee may, upon receipt of written approval from the Northeast District Office of the Ohio EPA, 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.
6. 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 landfill surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure.

The information required in 6.d shall be kept separately for (i) the load-in operation and (ii) the landfill surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.
7. The permittee shall annually record the amount of MSW waste deposited.
8. For the Lorain County Landfill #1 active gas collection system, the permittee shall install a sampling port at each wellhead and record the gauge pressure in the gas collection header on a monthly basis.
9. For the Lorain County Landfill #2 active gas collection system, the permittee shall install a sampling port and a thermometer or other temperature measuring device, or an access port for temperature measurements at each wellhead and record the following information on a monthly basis:
 - a. the gauge pressure in the gas collection header at each individual well;
 - b. the nitrogen or oxygen concentration in the landfill gas; and
 - c. the temperature of the landfill gas.
10. For Lorain County Landfill #2, the permittee shall monitor surface concentrations of methane on a quarterly basis as follows:
 - a. Monitor surface concentrations of methane along the entire perimeter of the collection area and along a serpentine pattern spaced 30 meters apart (or a site-specific established spacing) for each collection area.
 - b. The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.
 - c. Surface emissions 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.6:
 - i. The location of each monitored exceedance shall be marked and the location recorded.
 - ii. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be remonitored within 10 calendar days of detecting the exceedance.
 - iii. If the remonitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the remonitoring shows a third exceedance for the same location, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Ohio EPA for approval. No further monitoring of that location is required until the action specified has been taken.

- iv. Any location that initially showed an exceedance, but has a methane concentration less than 500 ppm methane above background at the 10 day remonitoring specified above, shall be remonitored one month from the initial exceedance. If the one 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 one month remonitoring shows an exceedance, the actions specified above shall be taken.
11. For the enclosed combustors at Lorain County Landfill #1 and Lorain County Landfill #2, the permittee shall calibrate, maintain, and operate according to the manufacturer's specifications a gas flow rate measuring device that provides a measurement of gas flow to the control device. The gas flow shall be recorded at least every 15 minutes.
 12. For Lorain County Landfill #1 and Lorain County Landfill #2, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within each enclosed combustor when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
 13. For Lorain County Landfill #1 and Lorain County Landfill #2, if a gas flow measuring device is not installed for the bypass line, 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.
 14. For Lorain County Landfill #1 and Lorain County Landfill #2, the permittee shall maintain all the following information for the life of the control equipment as measured during the initial performance tests or compliance demonstrations:
 - a. The maximum expected gas generation flow rate as calculated based on the following:
 - i. For sites with unknown year-to-year solid waste acceptance rates:

$$Q_m = 2 \times L_o \times R \times \{(e \text{ to the power } -kc) - (e \text{ to the power } -kt)\}$$
 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 $(e \text{ to the power } -kc) = 1$)
 - ii. For sites with known year-to-year solid waste acceptance rate:

$$Q_m = \text{Summation of } \{2 \times k \times L_o \times M_i \times (e \text{ to the power } -kt_i \text{ for } i = 1 \text{ through } i = n)\}$$
 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
 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 paragraph A.III.14.i. or ii. If the landfill is still accepting waste, the actual measured flow rate will not equal the maximum expected gas generation rate, so calculations using the equations in paragraph A.III.14.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 percent reduction of NMOC achieved by the enclosed combustion device.
 - d. The gas flow rate or bypass flow rate measurements.
 15. For Lorain County Landfill #1 and Lorain County Landfill #2, the permittee shall keep for the life of the collection systems up-to-date, readily accessible plot maps showing each existing and planned collector in the system and including a unique location label for each collector.
 16. For Lorain County Landfill #1 and Lorain County Landfill #2, the permittee shall keep for the life of the collection system up-to-date, readily accessible, on-site records of the maximum design capacity of each 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 Ohio EPA, Division of Solid and Infectious Waste Management, and shall satisfy this permit condition.
 17. For Lorain County Landfill #1 and Lorain County Landfill #2, the permittee shall conduct surface testing around the perimeter of each collection area along a pattern that traverses each landfill at 30-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover.
 18. For Lorain County Landfill #1 and Lorain County Landfill #2, the permittee shall monthly monitor the gauge pressure in the gas collection header at each wellhead. If a positive pressure exists, action shall be initiated

- to correct the exceedance within 5 calendar days, except for the conditions noted in A.II.4 of this permit. If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measures shall not cause exceedances of other operational or performance standards.
19. For Lorain County Landfill #2, the permittee shall record, each day, all 3-hour blocks of time during which the average combustion temperature within the enclosed combustor was less than 1370 degrees Fahrenheit.
 20. For Lorain County Landfill #1, the permittee shall record, each day, all 3-hour blocks of time during which the average combustion temperature within the enclosed combustor was less than 1400 degrees Fahrenheit.

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IV. Reporting Requirements

1. The permittee shall submit quarterly deviation reports that identify any of the following occurrences relating to fugitive dust emissions from the landfill operations:
 - 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.
3. For Lorain County Landfill #1 and Lorain County Landfill #2, any breakdown or malfunction of the landfill gas collection systems resulting in the emission of raw landfill gas emissions to the atmosphere shall be reported to the Northeast District Office of the Ohio EPA within one hour after the occurrence, or as soon as reasonably possible, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions to the atmosphere.
4. For Lorain County Landfill #2, the permittee shall submit a closure report to the Northeast District Office of the Ohio EPA 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. For Lorain County Landfill #1, 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).
5. For Lorain County Landfill #2, the permittee shall submit an equipment removal report to the Northeast District Office of the Ohio EPA, 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.
6. For Lorain County Landfill #1, the permittee shall submit an equipment removal report to the Northeast District Office of the Ohio EPA, 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.
7. For Lorain County Landfill #1 and Lorain County Landfill #2, the permittee shall submit deviation (excursion) reports that identify any of the following occurrences:
 - a. any record which indicates that the gauge pressure in the gas collection header at each individual well was positive, after actions specified in A.III.18 are taken;
 - b. any record which indicates that the nitrogen or oxygen concentration in the landfill gas was greater than 20% or 5%, respectively, unless the conditions of A.II.5 are met;
 - c. any record which indicates that the temperature of the landfill gas was greater than 55 degrees Celsius, unless the conditions of A.II.5 are met;
 - d. any record which indicates that the surface concentration of methane was greater than 500 parts per million above background, after actions specified in A.III.9 are taken;
 - e. all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow or any record which indicates that the bypass line was not maintained in the closed position;
 - f. for Lorain County Landfill # 2, all 3-hour periods of operation during which the average combustion temperature was less than 1370 degrees Fahrenheit; and
 - g. for Lorain County Landfill # 1, all 3-hour periods of operation during which the average combustion temperature was less than 1400 degrees Fahrenheit.
8. For Lorain County Landfill #1 and Lorain County Landfill #2, the permittee shall submit annual reports which include the following:
 - a. all periods when the collection system was not operating in excess of 5 days;
 - b. any record indicating the date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 60.755(a)(3), (b), and (c)(4); and

- c. the description and duration of all periods when the enclosed combustion devices were not operating for a period exceeding 1-hour.

These reports shall be submitted by January 31 of each year.

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V. **Testing Requirements**

1. Compliance with the visible emission limitations for the landfill surfaces and enclosed combustors identified above shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources").

2. Emission Limit: 2.69 pounds per hour of particulate emissions from the Lorain County Landfill #2 enclosed combustor.

Applicable Compliance Method: Compliance may be determined by the following equation:

$ER = (17 \times F \times 0.5 \times 60) / 1E6$ where:

ER = emission rate (pounds per hour)

17 = emission factor from AP-42, section 2.4, Municipal Solid Waste Landfills, version 11/98 (lbs of particulate emissions per million cubic feet of methane)

F = average flow rate of landfill gas into enclosed combustor (dscfm)

0.5 = assumption that 50% of landfill gas is methane

60 = conversion factor (minutes/hour)

1E6 = part of emission factor associated with AP-42

Compliance with the mass emission limitation shall be determined by using Method 5 as set forth in 40 CFR Part 60, Appendix A, if required by the Ohio EPA.

3. Emission Limit: 11.8 tons per year of particulate emissions from the Lorain County Landfill #2 enclosed combustor.

Applicable Compliance Method: Compliance shall be determined by multiplying the pounds per hour limit above by 8760 (hours per year) and dividing by 2000 (pounds per ton).

4. Emission Limit: 8.19 pounds per hour of nitrogen oxides from the Lorain County Landfill #2 enclosed combustor

Applicable Compliance Method: Compliance may be determined by using the following equation:

$ER = (40 \times F \times 0.5 \times 60) / 1E6$ where:

ER = emission rate (pounds per hour)

40 = emission factor from AP-42, section 2.4, Municipal Solid Waste Landfills, 11/98 version. (lbs of nitrogen oxides per million cubic feet of methane)

F = average flow rate of landfill gas into the enclosed combustor (dscfm)

0.5 = assumption that 50% of landfill gas is methane

60 = conversion factor (min/hour)

1E6 = part of emission factor associated with AP-42

Compliance with the mass emission limitation shall be determined by using Method 7 as set forth in 40 CFR Part 60, Appendix A, if required by the Ohio EPA.

5. Emission Limit: 35.9 tons per year of nitrogen oxides from the Lorain County Landfill #2 enclosed combustor.

Applicable Compliance Method: Compliance shall be determined by multiplying the pounds per hour limit by 8760 (hours per year) and dividing by 2000 (pounds per ton).

6. Emission Limit: 3.70 pounds per hour of sulfur dioxide from the Lorain County Landfill #2 enclosed combustor.

Applicable Compliance Method: Compliance may be determined by using the following equation:

$ER = (8.14E-6 \times F \times 0.5 \times 60) / 1E6$ where:

ER = emission rate (pounds per hour)

8.14E-6 = emission factor from AP-42, section 2.4, Municipal Solid Waste Landfills, 11/98 version (lbs of sulfur dioxide per million cubic feet of methane)

F = average flow rate of landfill gas into the enclosed combustor (dscfm)

0.5 = assumption that 50% of landfill gas is methane

60 = conversion factor (min/hour)

1E6 = part of emission factor associated with AP-42

Compliance with the mass emission limitation shall be determined by using Method 6 as set forth in 40 CFR Part 60, Appendix A, if required by the Ohio EPA.

7. Emission Limit: 16.2 tons per year of sulfur dioxide from the Lorain County Landfill #2 enclosed combustor.

Applicable Compliance Method: Compliance shall be determined by multiplying the pounds per hour limit by 8760 (hours per year) and dividing by 2000 (pounds per ton).

8. Emission Limit: 32.75 pounds per hour of carbon monoxide emissions from the Lorain County Landfill #2 enclosed combustor.

Applicable Compliance Method: If required, compliance shall be determined by performing emission tests in accordance with Method 10 of 40 CFR Part 60, Appendix A.

9. Emission Limit: 143.5 tons per year of carbon monoxide emissions from the Lorain County Landfill #2 enclosed combustor.

Applicable Compliance Method: Compliance shall be determined by multiplying the pounds per hour limit by 8760 (hours per year) and dividing by 2000 (pounds per ton).

10. Emission Limit: 3.19 pounds per hour of non-methane organic compound emissions from the Lorain County Landfill #2 enclosed combustor.

Applicable Compliance Method: If required, compliance shall be determined by performing emission tests in accordance with Method 25 or Method 25A of 40 CFR Part 60, Appendix A.

11. Emission Limit: 14.0 tons per year of non-methane organic compound emissions from the Lorain County Landfill #2 enclosed combustor.

Applicable Compliance Method: Compliance shall be determined by multiplying the pounds per hour limit above by 8760 (hours per year) and dividing by 2000 (pounds per ton).

12. Emission Limit: 8.04 pounds per hour of hydrogen chloride emissions from the Lorain County Landfill #2 enclosed combustor.

Applicable Compliance Method: If required, compliance shall be determined by performing emission tests in accordance with Method 26 or Method 26A of 40 CFR Part 60, Appendix A.

13. Emission Limit: 35.2 tons per year of hydrogen chloride emission from the Lorain County Landfill #2 enclosed combustor.

Applicable Compliance Method: Compliance shall be determined by multiplying the pounds per hour limit by 8760 (hours per year) and dividing by 2000 (pounds per ton).

14. Emission Limit: 3.10 tons per year of particulate emissions from the landfill surfaces.

Applicable Compliance Method: Compliance shall be determined by adding the results from applying the following equations:

For waste handling, AP-42, section 13.2.4, Aggregate Handling and Storage Piles, version 1/95:

$E = \{[k \times 0.0032 (U/5)^{1.3}] / (M/2)^{1.4}\} \times \text{TPY} / 2000$, where:

E = emission rate, tons per year
 k = particulate emissions coefficient, 0.74
 U = mean wind speed in mph, 7
 M = moisture content, 14%
 TPY = waste acceptance rate, tons per year
 2000 = conversion factor, pounds per ton

For wind erosion, from Air Pollution Engineering Manual, Chapter 4, Wind Erosion:

$E = 1.7 \times (s/1.5) \times [(365-p)/235] \times (f/15) \times A \times 365 / 2000$, where:

E = emissions (tons per year)
 s = silt content (5.2%)
 p = number of days with precipitation greater than or equal to 0.01 inches (150)
 f = percent of time the wind speed exceeds 12 miles per hour (assume 40%)
 A = area of landfill (acres)
 365 = conversion factor (days per year)
 2000 = conversion factor (pounds per ton)

15. The nitrogen level shall be determined using Method 3C of 40 CFR Part 60, Appendix A, unless an alternative test method is established as allowed by 40 CFR Part 60.752 (b)(2)(i).

16. The oxygen level 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;
- 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%.

17. For Lorain County Landfill #2, after 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 purpose 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 in 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).

18. To ensure compliance with the reduction of NMOC emissions by 98 weight percent or the reduction of NMOC outlet concentrations to less than 20 parts per million by volume, dry basis as hexane at 3 percent

oxygen, Method 25, 25A or Method 18 of 40 CFR Part 60, Appendix A shall be employed. Alternative USEPA approved test methods may be used with prior approval from the Ohio EPA Northeast District Office.

19. For Lorain County Landfill # 1 and Lorain County Landfill #2, the surface methane background concentration shall be determined by the following:
- use of an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications of 40 CFR 60.755(d);
 - moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter of the wells;
 - in accordance with Method 21, Section 4.3.1 of 40 CFR 60, Appendix A, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground; and
 - monitoring shall be performed during typical meteorological conditions.
20. For Lorain County Landfill #1 and Lorain County Landfill #2, the flow rate of landfill gas shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the enclosed combustion device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of Appendix A of 40 CFR Part 60.
21. For Lorain County Landfill #1 and Lorain County Landfill #2, the average NMOC concentration shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment, using the procedures in Method 25C or Method 18 of 40 CFR 60, Appendix A.
22. The permittee shall conduct, or have conducted, emission testing for the Lorain County Landfill #1 and Lorain County Landfill #2 enclosed combustors in accordance with the following requirements:
- The emission testing shall be conducted approximately 2.5 years after permit issuance and within 6 months prior to permit expiration.
 - The emission testing shall be conducted to demonstrate compliance with (i) the reduction of NMOC by 98 weight percent or reducing the NMOC outlet concentration to less than 20 parts per million by volume, dry basis as hexane at three percent oxygen, (ii) the allowable emission rate for hydrogen chloride, and (iii) the allowable emission rate for carbon monoxide.
 - The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for NMOC, Method 25, 25A or Method 18 of 40 CFR Part 60, Appendix A; for hydrogen chloride, Method 26 or Method 26A of 40 CFR Part 60, Appendix A; for carbon monoxide Method 10 of 40 CFR Part 60, Appendix A. Alternative USEPA approved test methods may be used with prior approval from the Ohio EPA.
 - The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Northeast District Office of the Ohio EPA.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Northeast District Office of the Ohio EPA. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Northeast District Office of the Ohio EPA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

23. Emission Limit: 1.20 pounds per hour of particulate emissions from the Lorain County Landfill #1 enclosed combustor.

Applicable Compliance Method: Compliance shall be determined by the following equation:

$ER = (17 \times F \times 0.5 \times 60) / 1E6$ where:

ER = emission rate (pounds per hour)

17 = emission factor from AP-42, section 2.4, Municipal Solid Waste Landfills, version 11/98 (lbs of particulate emissions per million cubic feet of methane).

F = average flow rate of landfill gas into enclosed combustor (dscf)

0.5 = assumption that 50% of landfill gas is methane

60 = conversion factor (minutes/hour)

1E6 = part of emission factor associated with AP-42

24. Emission Limit: 5.26 tons per year of particulate emissions from the Lorain County Landfill #1 enclosed combustor.

Applicable Compliance Method: Compliance shall be determined by multiplying the pounds per hour limit by 8760 (hours per year) and dividing by 2000 (pounds per ton).

25. Emission Limit: 5.46 pounds per hour of nitrogen oxides from the Lorain County Landfill #1 enclosed combustor

Applicable Compliance Method: Compliance shall be determined by using the following equation:

$$ER = (40 \times F \times 0.5 \times 60) / 1E6 \text{ where:}$$

ER = emission rate (pounds per hour)

40 = emission factor from AP-42, section 2.4, Municipal Solid Waste Landfills, 11/98 version (lbs of nitrogen oxides per million cubic feet of methane)

F = average flow rate of landfill gas into the enclosed combustor (dscfm)

0.5 = assumption that 50% of landfill gas is methane

60 = conversion factor (min/hour)

1E6 = part of emission factor associated with AP-42

26. Emission Limit: 23.91 tons per year of nitrogen oxides from the Lorain County Landfill #1 enclosed combustor.

Applicable Compliance Method: Compliance shall be determined by multiplying the pounds per hour limit by 8760 (hours per year) and dividing by 2000 (pounds per ton).

27. Emission Limit: 0.98 pound per hour of sulfur dioxide from the Lorain County Landfill #1 enclosed combustor.

Applicable Compliance Method: Compliance shall be determined by using the following equation:

$$ER = (8.14E-6 \times F \times 0.5 \times 60) / 1E6 \text{ where:}$$

ER = emission rate (pounds per hour)

8.14E-6 = emission factor from AP-42, section 2.4, Municipal Solid Waste Landfills, 11/98 version (lbs of sulfur dioxide per million cubic feet of methane)

F = Average flow rate of landfill gas into the enclosed combustor (dscfm)

0.5 = assumption that 50% of landfill gas is methane

60 = conversion factor (min/hour)

1E6 = part of emission factor associated with AP-42

28. Emission Limit: 4.30 tons per year of sulfur dioxide from the Lorain County Landfill #1 enclosed combustor.

Applicable Compliance Method: Compliance shall be determined by multiplying the pounds per hour limit by 8760 (hours per year) and dividing by 2000 (pounds per ton).

29. Emission Limit: 21.84 pounds per hour of carbon monoxide from the Lorain County Landfill #1 enclosed combustor.

Applicable Compliance Method: If required, compliance shall be determined by performing emission tests in accordance with Method 10 of 40 CFR Part 60, Appendix A.

30. Emission Limit: 95.64 tons per year of carbon monoxide from the Lorain County Landfill #1 enclosed combustor.

Applicable Compliance Method: Compliance shall be determined by multiplying the limit above by 8760 (hours per year) and dividing by 2000 (pounds per ton).

31. Emission Limit: 2.02 pounds per hour of hydrogen chloride from the Lorain County Landfill #1 enclosed combustor.

Applicable Compliance Method: If required, compliance shall be determined by performing emission tests in accordance with Method 26 or Method 26A of 40 CFR Part 60, Appendix A.

32. Emission Limit: 8.87 tons per year of hydrogen chloride from the Lorain County Landfill #1 enclosed combustor.

Applicable Compliance Method: Compliance shall be determined by multiplying the allowable emission rate above by 8760 (hours per year) and dividing by 2000 (pounds per ton).

33. Emission Limit: 3.19 pounds per hour of non-methane organic compound emissions from the Lorain County Landfill #1 enclosed combustor.

Applicable Compliance Method: If required, compliance shall be determined by performing emission tests in accordance with Method 25 or Method 25A of 40 CFR Part 60, Appendix A.

34. Emission Limit: 14.0 tons per year of non-methane organic compound emissions from the Lorain County Landfill #1 enclosed combustor.

Applicable Compliance Method: Compliance shall be determined by multiplying the pounds per hour limit above by 8760 (hours per year) and dividing by 2000 (pounds per ton).

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VI. Miscellaneous Requirements

- Pursuant to the authority in OAC 3745-77-07 (C)(2) or ORC Section 3704.03 (L), any representative of the Director may, upon presentation of proper identification, enter at any reasonable time upon any portion of the property where this landfill is located, including any improvements thereon, to make inspections, take samples, conduct tests and examine records or reports pertaining to any emissions of air contaminants and any monitoring equipment, emissions control equipment or methods. No operator or agent of this landfill shall act in any manner to refuse, hinder, or thwart this legal right of entry.

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B. State Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
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Lorain County Landfill #2 enclosed combustor.		
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2. **Additional Terms and Conditions**

1. None

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit (F002) was evaluated based on the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Hydrogen chloride

TLV (mg/m3): 5.530

Maximum Hourly Emission Rate (lbs/hr): 8.04

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.692

MAGLC (ug/m3): 132

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust

flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None