

Facility ID: 0320010042 Issuance type: Title V Preliminary Proposed 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. There are no insignificant emissions units listed by the applicant for this facility.

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**b State Only Enforceable Section**

1. None

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**Part III - Terms and Conditions for Emissions Units**

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Facility ID: 0320010042 Emissions Unit ID: F001 Issuance type: Title V Preliminary Proposed 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 03-16369 issued December 19, 2006)	31.6 tons fugitive particulate emissions (PE) /yr
	OAC rule 3745-17-07(B)(1)	See Section A.I.2.j.
	OAC rule 3745-17-08(B)(1)	See Section A.I.2.k.
	ORC 3704.03(T)(4)	See Section A.I.2.l.
paved roadways and parking areas (see Section A.2.a)	OAC rule 3745-31-05(A)(3) (PTI 03-16369)	no visible particulate emissions (PE), except for a period of time not to exceed one minute during any 60-minute observation period
		best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.I.2.c, and A.I.2.e through A.I.2.i)
unpaved roadways and parking areas (see Section A.2.b)	OAC rule 3745-31-05(A)(3) (PTI 03-16369)	no visible PE, except for a period of time not to exceed three minutes during any 60-minute observation period
		best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.I.2.d through A.I.2.i)

**2. Additional Terms and Conditions**

- a. The paved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:
  - (a) paved roadways and parking areas:  
The 0.29-mile main entrance paved road segment, as specified in the PTI application
- 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 and parking areas:  
The 0.71-mile main access ramp, 0.18-mile service road north, 0.98-mile east perimeter service road, 1.06-mile west perimeter service road, 0.03-mile west exit, 0.2-mile south exit, and 1.5-mile borrow area road, as specified in the PTI application.
- c. The permittee shall employ best 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 flushing with water at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.
- d. The permittee shall employ best available control measures on all unpaved 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 unpaved

roadways and parking areas with watering or other suitable dust suppression chemicals, at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective 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 above-mentioned applicable 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 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 measure(s) specified above for paved surfaces. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to the visible emission limitation for paved roadways and 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. 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.
- i. 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 3745-31-05.
- j. This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(B) pursuant to OAC rule 3745-17-07(B)(11)(e).
- k. The facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B)(1).
- l. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the emissions of particulate matter less than or equal to 10 microns in size (PM10) from this air contaminant source since the calculated annual emission rate for PM10 is less than ten tons per year taking into account the enforceable requirement to apply best available control measures to minimize or eliminate visible emissions of fugitive dust.

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#### II. Operational Restrictions

- 1. None

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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 the roadways and parking areas in accordance with the following frequencies:
  - paved roadways and parking areas minimum inspection frequency  
All Once per day of operation
  - unpaved roadways and parking areas minimum inspection frequency  
All Once per day of operation  
[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1)]
- 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.  
[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1)]
- 3. 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 3.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.

[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1)]

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#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify the following:
  - 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.

The permittee shall submit these reports in accordance with the General Terms and Conditions of this permit.

[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1)]

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#### V. Testing Requirements

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

- a. Emission Limitation:  
31.6 tons/yr fugitive PE

Applicable Compliance Method:

The emission limitation was established by multiplying AP-42 emission factors (see below) for paved and unpaved roadways [Section 13.2.1.2 (12/03) and Section 13.2.2.2 (12/03)], by the maximum vehicle miles traveled (VMT - see below), and applying a control efficiency of 90% for use of best available control measures.

Paved roadways and parking areas - 0.88 lbs PE/VMT and 7657 VMT

Unpaved roadways and parking areas - 4.19 (Main Access), 1.69 (Service Road N), 4.10 (E Perimeter), 4.10 (W Perimeter), 1.69 (W Exit), 1.69 (S Exit), 13.7 (Borrow Area) lbs PE/VMT; and 39,200 (Main Access), 40 (Service Road N), 54,150 (E Perimeter), 1300 (W Perimeter), 3 (W Exit), 21 (S Exit), 17,000 (Borrow Area) VMT

Therefore, provided compliance is shown with the requirements of this permit to apply best available control measures, compliance with the ton per year PE limitation will be assumed.

[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1)]

- b. Emission Limitation:  
no visible PE, except for a period of time not to exceed one minute during any 60-minute observation period for paved roadways and parking areas

Applicable Compliance Method:

Compliance with the visible emission limitation specified 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)(c) of OAC rule 3745-17-03.

[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1)]

- c. Emission Limitation:  
no visible PE, except for a period of time not to exceed three minutes during any 60-minute observation period for unpaved roadways and parking areas

Applicable Compliance Method:

Compliance with the visible emission limitation specified 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, 2002, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0320010042 Emissions Unit ID: F001 Issuance type: Title V Preliminary Proposed Permit

**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>
Landfill Roadways and Parking Areas	none	none

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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**Part III - Terms and Conditions for Emissions Units**

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**Facility ID: 0320010042 Emissions Unit ID: P901 Issuance type: Title V Preliminary Proposed 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>
Municipal Solid Waste Landfill	OAC rule 3745-31-05 (A)(3) (PTI 03-16369 issued December 19, 2006)	55.0 tons of fugitive nonmethane organic compounds (NMOC)/year  21,400 tons of fugitive methane/year  44.0 tons fugitive volatile organic compounds (VOC) / year (80% of NMOC)
	ORC 3704.03(T)(4)	11.6 tons fugitive carbon monoxide (CO) /year
	40 CFR 60.750 et seq. (NSPS Subpart WWW)	See Section A.I.2.1. See A.I.2.a, b, and j, and sections A.III - A.V below.
	40 CFR 63.1930 et seq. (MACT Subpart AAAAA)	none (See Section A.I.2.h.)
	OAC rule 3745-17-07(B)(1)	none (See Section A.I.2.i.)
	OAC rule 3745-17-08(B)	none (See Section A.I.2.j.)

**2. Additional Terms and Conditions**

- a. The permittee (owner or operator), for the MSW landfill having a design capacity greater than 2.5 million cubic meters by volume or 2.5 million megagrams by mass, shall calculate the landfill nonmethane organic compounds (NMOC) emission rate annually or may elect to calculate and submit an estimate of the annual NMOC emission rate for the next 5-year period, in lieu of an annual report; and if the estimated NMOC emission rate can be documented to be less than 50 megagrams for each of the next five consecutive years. The estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for the next 5 years. The NMOC emissions for each year shall be calculated using the procedures and appropriate equation contained in this permit [and 40 CFR 60.754(a)]. The landfill NMOC emissions can be calculated in 1, 2 or 3 Tiers as follows:
  - (a)
    - i. Tier 1: the NMOC emissions are calculated using the appropriate formula and the default values from 40 CFR 60.754(a)(1);
    - ii. Tier 2: the NMOC emissions are calculated, using the appropriate formula from 40 CFR 60.754(a)(1), using the site specific NMOC concentration (instead of the default value), obtained through the sampling procedures specified in 40 CFR 60.754(a)(3), using either Method 25C or Method 18 of Part 60 appendix A;
    - iii. Tier 3: the NMOC emissions are calculated, using the appropriate formula from 40 CFR 60.754(a)(1), using the site-specific methane generation rate constant, k, determined as required in 40 CFR 60.754(a)(4), using Method 2E of Part 60 appendix A, and the site-specific NMOC concentration determined from the sampling in Tier 2, 40 CFR 60.754(a)(3).
- a. If the actual waste acceptance rate exceeds the estimated acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the director (the Ohio EPA, Northwest District Office). The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate, or the reporting frequency shall be changed to annual.
 

The initial 5-year NMOC emissions report shall be submitted to the director by January 31st, following the first year in which the landfill design capacity exceeded 2.5 million cubic meters by volume or 2.5 million megagrams by mass, and shall cover the preceding calendar year and the 5 consecutive years that follow. The NMOC emissions report shall be submitted by January 31st every 5 years, until a collection and control system is installed in compliance with 60.752(b)(2) and operating in accordance with 40 CFR 60.753 and 60.755.  
[40 CFR 60.752(b), 60.754(a), & 60.757(b)]

- b. As long as the calculated NMOC emission rate is calculated to be less than 50 megagrams per year the permittee shall:
- i. submit the initial 5-year NMOC emission rate report and either annual or 5-year emission reports thereafter; and
  - ii. recalculate the NMOC emission rate following the fifth year and every 5 years thereafter, using the procedures and calculation specified in 40 CFR 60.754(a) and contained in the testing section of this permit.
- If Tier 2 is used to calculate the estimated annual NMOC emissions, the site-specific NMOC concentration shall be re-tested every 5 years, as required in 40 CFR 60.754(a)(3).
- If Tier 3 is used to calculate the estimated annual NMOC emissions, the initial/original site-specific methane generation rate constant shall be used in all future annual NMOC emission calculations and reports.
- The NMOC emissions report shall be submitted by January 31st every 5 years (unless reverting to annually), until such time a collection and control system is installed in compliance with 60.752(b)(2) and operated in accordance with 40 CFR 60.753 and 60.755, or the landfill is closed.
- Unless other arrangements are made with the director, the permittee shall submit a permit to install (PTI) application with the first annual report where the calculated NMOC emissions exceed 50 megagrams per year, in order to permit the facility for the collection and control system(s) required by the Standards of Performance for Municipal Solid Waste Landfills, Subpart WWW.  
[40 CFR 60.752(b)]
- c. The facility shall not accept for disposal any regulated asbestos containing material (RACM) as defined in the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Asbestos, 40 CFR Part 61, Subpart M, Section 141 and OAC rule 3745-20, or any subsequent revisions to either rule. RACM is defined to include:
- i. friable asbestos material;
  - ii. Category I nonfriable asbestos containing material that has become friable;
  - iii. Category I nonfriable asbestos containing material that will be or has been subjected to sanding, grinding, cutting, or abrading; or
  - iv. Category II nonfriable asbestos containing material that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.
- In addition, this facility shall not accept any Category II nonfriable asbestos-containing material. For asbestos materials, the permittee shall be limited to accepting Category I nonfriable asbestos containing material that has not or will not be subjected to sanding, grinding, cutting, or abrading. The permittee shall ensure that any Category I nonfriable asbestos containing material which has not or will not be subjected to sanding, grinding, cutting, or abrading shall not become friable during processing at the landfill. Any asbestos containing material that is or becomes friable is subject to the asbestos NESHAP regulation.  
[40 CFR Part 61, Subpart M & OAC 3745-20]
- d. If any asbestos material arrives at the landfill from an unregulated residence and meets the description of RACM as described in A.1.2 c above, the landfill shall:
- i. cause or permit no visible emissions to the outside air from the asbestos-containing waste materials during on-site transportation, transfer, deposition or compacting operations;
  - ii. assure that deposition and burial operations be conducted in a manner which prevents handling by equipment or persons that causes asbestos-containing waste materials to be broken-up or dispersed before the materials are buried;
  - iii. cover the asbestos-containing waste material with at least twelve inches of nonasbestos-containing material, as soon as practicable after deposition, but no later than at the end of the operating day; and
  - iv. assure that during the unloading, deposition, burial and initial compaction of asbestos-containing waste materials, the disposal site is restricted adequately to deter unauthorized entry of the general public and any unauthorized personnel to within one hundred feet of the operations.  
[40 CFR Part 61, Subpart M & OAC 3745-20]
- e. There shall be no open burning, in violation of OAC Chapter 3745-19, at this facility.  
[OAC 3745-19]
- f. Pursuant to the authority in 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; examine records or reports pertaining to any emissions of air contaminants; and inspect monitoring equipment, emissions control equipment, and/or methods of operation and gas sampling. No operator or agent of this landfill shall act in any manner to refuse, hinder, or thwart this legal right of entry.

[ORC section 3704.03(L)]

- g. The permittee shall submit a permit to install (PTI) modification application and be issued a new PTI, before and where an expansion or an increase in the waste material received increases the NMOC emissions to equal or exceed 50 megagrams/year. If the amended design capacity report is not submitted with the PTI application, the permittee shall submit an amended design capacity report to the director within 90 days of the increase in the maximum design capacity of the landfill.  
[40 CFR 60.752(a) & 60.757(a)]
- h. This facility is not subject to 40 CFR Part 63, Subpart AAAAA, pursuant to 40 CFR 63.1935.
- i. his emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(B) pursuant to OAC rule 3745-17-07(B)(11)(e).
- j. The facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B)(1).
- k. Hydrogen Sulfide Emissions Contingency Plan  
  
As part of the Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3), Ohio EPA may request the permittee to develop and implement a hydrogen sulfide emissions contingency plan. If requested, the contingency plan shall meet the requirements detailed in rules developed in response to House Bill (H.B.) 397.  
  
Under H.B. 397 signed by the governor December 22, 2005, Ohio EPA is required to develop rules governing the operation of construction and demolition debris (C&DD) landfills. One part of this bill requires Ohio EPA to require C&DD facilities to develop and implement a contingency plan for the effective action in response to hydrogen sulfide or other gas emissions. However, Ohio EPA believes it may become important for facilities other than C&DD landfills to have in place a contingency plan to deal with potential hazardous emissions. Therefore, as a condition of this permit, if requested, the permittee will be required to develop and implement a hydrogen sulfide / other gas emission contingency plan consistent with the requirements developed in response to H.B. 397.
- l. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions (PE) and particulate matter less than or equal to 10 microns in size (PM10) from this air contaminant source since the uncontrolled potential to emit for PE and PM10 is less than 10 tons per year.

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II. **Operational Restrictions**

- 1. None

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III. **Monitoring and/or Record Keeping Requirements**

- 1. The permittee shall keep for at least 5 years, up-to-date, readily accessible, on-site records of the design capacity report which showed the landfill capacity to equal or exceed 2.5 million megagrams and/or 2.5 million cubic meters, 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.  
[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1), and 40 CFR 60.758(a)]
- 2. The permittee shall maintain records of the total volume of material received each day. These records shall be maintained for a period of not less than three years, and the records shall be available for review by the director or his representative during normal business hours.  
[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1)]
- 3. This solid waste landfill has a design capacity greater than 2.5 million megagrams or 2.5 million cubic meters; therefore, the permittee shall calculate the NMOC emission rate for the landfill using the procedures specified in 40 CFR 60.754(a)(1) and this permit, and shall maintain records of such calculations. Except as provided in 60.757(b)(1)(ii) (where NMOC emissions can be calculated to be less than 50 megagrams in each of the next 5 consecutive years), the NMOC emission rate shall be re-calculated and reported annually.  
[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1), and 40 CFR 60.752(b)(2)]
- 4. The permittee shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing and/or nondegradable wastes, excluded from collection as provided in 40 CFR 60.759(a)(3)(i), as well as any nonproductive areas excluded from collection as provided in 40 CFR 60.759(a)(3)(ii).  
[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1), and 40 CFR 60.758(d)(2)]

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IV. **Reporting Requirements**

1. Until a collection and control system is installed, meeting the requirements of 40 CFR 60.753 and 60.755, the permittee shall submit an annual NMOC emission rate report to the director, except for the provisions for the "5-year" estimate below. The director may request such additional information as may be necessary to verify the reported NMOC emission rate.
  - a. The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate, calculated using the formula from 40 CFR 60.754(a), also contained in this permit:
    - i. The initial NMOC emission rate report may be combined with the initial design capacity report. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided for below.
    - ii. If the estimated NMOC emission rate as reported in the annual report to the director is less than 50 megagrams per year in each of the next 5 consecutive years, the permittee may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the director. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the director. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.
  - b. The permittee is exempted from the requirements of submitting the annual or 5-year NMOC emission estimate report, following the installation of a collection and control system meeting the requirements of 40 CFR 60.753 and 60.755, or when the landfill is closed.  
[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1), and 40 CFR 60.757(b)]
2. Unless otherwise approved by the director, the permittee shall submit a PTI application along with the first NMOC emissions report in which the emission rate exceeds 50 megagrams per year; and a collection and control system design plan shall be submitted within 1 year of the first NMOC emissions report in which the emission rate exceeds 50 megagrams per year, except as follows:
  - a. If the permittee elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis, as provided in 40 CFR 60.754(a)(3), and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the re-calculated emission rate based on NMOC sampling and analysis, shall be submitted to the director within 180 days of the first calculated emission rate exceeding 50 megagrams per year.
  - b. If the permittee elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in 40 CFR 60.754(a)(4), and the resulting NMOC emission rate is less than 50 megagrams per year, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance of 50 megagrams per year. The revised NMOC emission rate report, based on the provisions of 40 CFR 754(a)(4) and the resulting site-specific methane generation rate constant (k), shall be submitted to the director within 1 year of the first calculated emission rate exceeding 50 megagrams per year.  
[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1), and 40 CFR 60.757(c)]
3. The permittee shall submit a closure report to the Division of Air Pollution Control at the appropriate Ohio EPA office of jurisdiction, within 30 days of waste acceptance cessation. Permanent closure shall be conducted in accordance with the requirements of 40 CFR 258.60; and the Ohio EPA may request additional information, as may be necessary, to verify that all of these conditions are met. 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 60.7(a)(4).  
[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1), and 40 CFR 60.757(d)]
4. Pursuant to the New Source Performance Standards (NSPS), the source owner/operator is hereby advised of the requirements to report the following at the appropriate times:
  - a. construction date (no later than 30 days after such date);
  - b. actual start-up date (within 15 days after such date); and
  - c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency  
DAPC - Permit Management Unit  
Lazarus Government Center  
P.O. Box 1049  
Columbus, OH 43216-1049

and

Ohio EPA, Northwest District Office  
347 North Dunbridge Road  
Bowling Green, Ohio 43402  
[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. The permittee shall calculate the NMOC emission rate using either the equation provided in 40 CFR 60.754(a)(1)(i) or the equation provided in 40 CFR 60.754(a)(1)(ii), and specified below. Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in 40 CFR 60.754(a)(1)(i), for part of the life of the landfill. The default values to be used in both equations are 0.05 per year for "k", unless a site-specific methane generation rate constant is determined as specified in a Tier 3 determination; 170 cubic meters per megagram for "L0"; and 4,000 ppm by volume as hexane for "CNMOC", unless samples are collected and the actual NMOC concentration is determined, as specified in a Tier 2 determination.

a. The following equation shall be used if the actual year-to-year solid waste acceptance rate is known:

$$\text{Mnmoc} = \text{SUM} (i = 1 \text{ to } n) \text{ of } 2(k)(L_0)(M_i)(e^{-(kt)})(\text{Cnmoc})(3.6 \times 10^{-9})$$

where,

Mnmoc = Total NMOC emission rate from the landfill, megagrams per year

k = methane generation rate constant, year<sup>-1</sup>

L<sub>0</sub> = methane generation potential, cubic meters per megagram solid waste

M<sub>i</sub> = mass of solid waste in the i<sup>th</sup> section, megagrams

t<sub>i</sub> = age of the i<sup>th</sup> section, years

Cnmoc = concentration of NMOC, parts per million by volume as hexane

3.6 x 10<sup>-9</sup> = conversion factor

n = number of sections

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill, when calculating the value for M<sub>i</sub>, if documentation of the nature and amount of such wastes is maintained.

b. The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown:

$$\text{Mnmoc} = 2(L_0)(R)(e^{-(kc)} - e^{-(k-t)})(\text{Cnmoc})(3.6 \times 10^{-9})$$

Where:

Mnmoc = mass emission rate of NMOC, megagrams per year

L<sub>0</sub> = methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, year<sup>-1</sup>

t = age of landfill, years

Cnmoc = concentration of NMOC, parts per million by volume as hexane

c = time since closure, years; for active landfill c=0 and e-kc=1

3.6 x 10<sup>-9</sup> = conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value of R, if documentation of the nature and amount of such wastes is maintained.

[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1), and 40 CFR 60.754(a)(1)]

2. The permittee shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year. If the calculated NMOC emission rate is calculated to be less than 50 megagrams per year, then the permittee shall submit an emission rate report as required in 40 CFR 60.757(b)(1), and shall recalculate the NMOC mass emission rate annually and submit the report to the director, as required under 40 CFR 60.752(b)(1) and as provided in this permit.

If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the permittee shall submit, within one year, a collection and control system design plan, prepared by a professional engineer, and shall install it in compliance with 40 CFR 60.752(b)(2); or shall determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in a Tier 2 determination, in 40 CFR 60.754(a)(3).

[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1), and 40 CFR 60.754(a)(2)]

3. For a Tier 2 determination of the NMOC emission rate, the permittee shall determine the NMOC concentration using the following sampling procedure:

a. The permittee shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 sample probes are required. The sample probes should be located to avoid known areas of nondegradable solid waste.

b. The permittee shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25 or 25C of Appendix A of 40 CFR Part 60. Method 18 of Appendix A of 40 CFR Part 60 may be used to analyze the samples collected by the Method 25 or 25C sampling procedure.

c. Taking composite samples from different probes into a single cylinder is allowed; however, equal sample volumes must be taken from each probe. For each composite, the sampling rate, collection times, beginning and ending cylinder vacuums, or alternative volume measurements must be recorded to verify that composite volumes are equal. Composite sample volumes should not be less than one liter, unless evidence can be provided to substantiate the accuracy of smaller volumes. The compositing shall be terminated before the cylinder approaches ambient pressure where measurement accuracy diminishes.

d. If using Method 18, the permittee must identify all compounds in the sample, and, at a minimum, test for those compounds published in the most recent Compilation of Air Pollutant Emission Factors (AP-42), minus carbon monoxide, hydrogen sulfide, and mercury. At a minimum, the instrument must be calibrated for each of the compounds on the list. The concentration of each Method 18 compound shall be converted to CNMOC as hexane by multiplying it by the ratio of its carbon atoms divided by six.

- e. The permittee shall also divide the NMOC concentration determined from Method 25 or 25C of Appendix A of 40 CR Part 60 by six, to convert from CNMOC as carbon to CNMOC as hexane.
- f. If the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes, provided the removal system can be shown to provide sampling as representative as the two sampling probe per hectare requirement. For active collection systems, samples may be collected from the common header pipe before the gas moving or condensate removal equipment. For these systems, a minimum of three samples must be collected from the header pipe.
- g. If more than the required number of samples are taken, all samples must be used in the analysis.
- h. The permittee shall recalculate the NMOC mass emission rate using the average NMOC concentration from the collected samples instead of the default value.
- i. If the resulting mass emission rate, recalculated using the site-specific NMOC concentration, is equal to or greater than 50 megagrams per year, the permittee shall either:
- comply with 40 CFR 60.752(b)(2) and submit, within one year, a collection and control system design plan, and install the system within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, as required by rule, or
  - determine the site-specific methane generation rate constant,  $k$ , in a Tier 3 determination, and recalculate the NMOC emission rate using the site-specific NMOC concentration from Tier 2 and site-specific methane generation rate constant,  $k$ , from Tier 3.
- j. If the resulting mass emission rate, recalculated using the site-specific NMOC concentration, is less than 50 megagrams per year, the permittee shall submit annual reports (or 5-year submission per 40 CFR 60.757(b)(1)(ii)) for the estimated NMOC emissions, recalculated each year using the site-specific NMOC concentration and as provided in 40 CFR 60.757(b)(1). The site-specific NMOC concentration shall be retested, as above, every 5 years.  
[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1), and 40 CFR 60.754(a)(3)]
4. For a Tier 3 determination of the NMOC emission rate, the permittee shall determine the site-specific methane generation rate constant, using the procedures provided in Method 2E of Appendix A of 40 CFR, Part 60. The permittee shall estimate the NMOC mass emission rate using the equations from 40 CFR 60.754(a)(1), and included in this permit, using a site-specific methane generation rate constant  $k$  and the site-specific NMOC concentration from Tier 2, instead of the default values provided with the calculation in the rule. The permittee shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.
- If the resulting NMOC mass emission rate, calculated using the site-specific methane generation rate constant from Tier 3 and the site-specific concentration of NMOC from Tier 2, is equal to or greater than 50 megagrams per year, the permittee shall comply with 40 CFR 60.752(b)(2) and submit, within one year, a collection and control system design plan, and install the system within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, as required by rule; or
  - If the resulting NMOC mass emission rate, calculated using the site-specific methane generation rate constant from Tier 3 and the site-specific concentration of NMOC from Tier 2, is less than 50 megagrams per year, the permittee shall submit annual reports (or 5-year submission per 40 CFR 60.757(b)(1)(ii)) for the estimated NMOC emissions, recalculated each year using the site-specific methane generation rate constant  $k$  and the site-specific NMOC concentration from Tier 2, and submitted as provided in 40 CFR 60.757(b)(1).
  - The site-specific NMOC concentration shall be retested, as above, every 5 years, to be used in the NMOC emission estimate calculations. However, the calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations.  
[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1), and 40 CFR 60.754(a)(4)]
5. The permittee may use other methods to determine the NMOC concentration or site-specific methane generation rate constant  $k$ , as an alternative to the methods required in 40 CFR 754(a)(3) or (4), only if the method has been approved by the Administrator of the U.S. Environmental Protection Agency.  
[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1), and 40 CFR 60.754(a)(5)]
6. When calculating emissions for PSD purposes, the permittee shall estimate the NMOC emission rate, for comparison to the PSD major source and significance levels in 40 CFR 51.166 or 40 CFR 52.21 using AP-42 or other approved measurement procedures.  
[OAC 3745-31-05(A)(3) and 3745-77-07(C)(1), and 40 CFR 60.754(c)]
7. Compliance with the emissions limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
- Emission Limitations:  
55.0 tons NMOC /year  
21,400 tons methane /year.  
44.0 tons VOC / year (80% of NMOC)  
11.6 tons CO /year
- Applicable Compliance Method:  
Emissions shall not exceed these values based on the calculations referenced below. These calculations represent the highest emission rates which could occur based on US EPA's Landfill Gas Emission Model (LandGEM).
- The maximum gas generation/emissions were calculated or predicted using LandGEM, based on the proposed landfill capacity of (9,625,000 megagrams) divided equally over approximately 43 years of proposed operation, at the maximum receiving rate of 208,000 megagrams of waste material per day (680 Mg /day for 307 days/yr). Predictions are for year 2044.

- a. NMOC concentrations and emissions were determined according to 40 CFR 60, Appendix A, Method 25C and LandGEM (Tier 2 value of 102).
- b. CH4 emissions were estimated according to US EPA's AP-42, Compilation of Air Pollution Emission Factors, Chapter 2.4, for municipal solid waste landfills, (11/98) and LandGEM.
- c. VOC emissions were estimated as 80 percent of NMOC according to 61 FR 9912.
- d. CO emissions were estimated according to US EPA's AP-42, Compilation of Air Pollution Emission Factors, Chapter 2.4, for municipal solid waste landfills, (11/98) and LandGEM. [OAC 3745-31-05(A)(3), 40 CFR 60 Subpart WWW, and 3745-77-07(C)(1)]

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**VI. Miscellaneous Requirements**

- 1. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements for 40 CFR Part 60 are also federally enforceable.

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**Facility ID: 0320010042 Emissions Unit ID: P901 Issuance type: Title V Preliminary Proposed Permit**

**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>
Municipal Solid Waste Landfill	none	none
<b>2. Additional Terms and Conditions</b>		
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