

AIR EMISSIONS SUMMARY

The air contaminant sources listed below comprise the Permit to Install for Superior Noble Road Landfill, Inc. in Richland County. The sources listed below shall not exceed the emission limits/control requirements contained in the table below. This condition in no way limits applicability of any other state and federal regulations. Additionally this condition does not limit the applicability of additional special terms and conditions of this permit.

<u>Ohio EPA Emissions Unit #</u>	<u>Identification/Description</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emission or Control & Usage Requirements</u>
P901	Municipal Solid Waste Landfill	Compliance with 40 CFR Part 60 Subpart W, Standards of Performance for Municipal Solid Waste Landfills.	40 CFR Part 60 subpart W, 40 CFR Part 61, subparts A and M, OAC rule 3745-31-05	<p><u>Uncontrolled Emission Rate</u> 5110.0 lbs Methane/Hr; 22300.0 tons Methane/yr;</p> <p>32.7 lbs NMOC/Hr; 143.0 tons NMOC/Yr; 0.95 lb Chlorine/Hr; 4.15 tons Chlorine/Yr;</p> <p><u>Controlled Emission Rate</u> 1530.0 lbs Methane/Hr;* 6700.0 tons Methane/yr,*</p> <p>9.8 lbs NMOC/Hr;* 42.9 tons NMOC/Yr,*</p> <p>0.284 lb Chlorine/Hr;* 1.25 tons Chlorine/Yr,*</p> <p>86.6 lbs Methane/Hr;** 379.0 tons Methane/yr,**</p> <p>0.555 lbs NMOC/Hr;** 2.43 tons NMOC/Yr;**</p> <p>0.017 lb HCL/Hr;** 0.073 tons HCL/Yr;**</p>

			21.2 lbs CO/Hr;** 92.8 tons CO/Yr;**
			26.5 lbs NOx/Hr;** 116.0 tons NOx/Yr;**
			3.32 lbs SO2/Hr;** 14.55 tons SO2/Yr;**
			5.08 lbs Particulate Emissions (PE)/Hr;** 22.3 tons PE/Yr;**
			20 % opacity as a three minute average
		OAC rule 3745-17-07	***
		OAC rule 3745-20	No Visible emissions for asbestos containing materials
F001 (Modified)	Paved roadways and parking areas	OAC rule 3745-31-05	90.5 tons PE/yr no visible particulate emissions except for one minute during any 60-minute period best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Additional Terms and Conditions (AST&C))
	Unpaved roadways and parking areas	OAC rule 3745-31-05	no visible particulate emissions except for 3 minutes during any 60-minute period

F002	Material Handling	OAC rule 3745-31-05	37.5 tons PE/yr best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see AST&C)
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- * Fugitive Emissions not captured by Control Device
- ** Emissions from Control Device
- *** The emission limitation(s)/opacity restriction established by this rule is less stringent than that established by OAC rule 3745-31-05 (BAT).

SUMMARY

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
Methane	_u 22300
NMOC	_u 143.0
Chlorine	_u 4.15
 Methane	 _c 7079
NMOC	_c 45.3
Chlorine	_c 1.25
HCL	_c 0.073
CO	_c 92.8
NOx	_c 116.0
SO2	_c 14.55
PE	_c 150.3

_u - Uncontrolled Emission Rate
_c - Controlled Emission Rate

ADDITIONAL SPECIAL TERMS AND CONDITIONS

INTRODUCTION:

The purpose of this permit-to-install (PTI) is to allow the installation of Superior Noble Road Landfill (d.b.a. Oakland Marsh Landfill) a Municipal Solid Waste Landfill located in Shiloh, Ohio. Superior Noble Road Landfill (herein referred to as "permittee") is subject to 40 CFR Part 60 subpart WWW Standards of Performance for Municipal Solid Waste Landfills and 40 CFR Part 61, subparts A and M, National Emission Standard for Asbestos. The Municipal Solid Waste Landfill has a design capacity greater than or equal to 2.5 million megagrams (2.5 million cubic meters). The permittee is subject to part 70 permitting requirements.

Potential emissions of each criteria pollutant are less than 250 tons per year, therefore, PSD regulations are not applicable. The permittee will comply with permit allowable mass emission limitations listed in the air emission summary of this permit under the section titled Uncontrolled Emission Rate until 40 CFR Part 60 subpart WWW requires operation of control equipment.

A. APPLICABLE EMISSION LIMITATIONS AND/OR CONTROL REQUIREMENTS

1. The permittee's solid waste landfill has a design capacity equal to or greater than 2.5 million megagrams or 2.5 million cubic meters. As a result the permittee shall either comply with 40 CFR, Part 60, subpart WWW section 60.752(b)(2) or calculate an NMOC emission rate for the landfill using the procedures specified in subpart WWW section 60.754. Calculation of the NMOC emission rate described in section 60.754 shall be recalculated annually, except as provided in 60.757(b)(1)(ii) of subpart WWW.

If the calculated NMOC emission rate is less than 50 megagrams per year, the owner or operator shall:

- a. Submit an annual emission report to the administrator, except as provided for in subpart WWW section 60.757(b)(1)(ii) and
- b. Recalculate the NMOC emission rate annually using the procedures specified in 60.754(a)(1) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.

If the NMOC emission rate upon recalculation is equal to or greater than 50 megagrams per year, the owner or

operator shall install a collection and control system. The collection and control system shall be installed in compliance with 40 CFR, Part 60, subpart WWW section 60.752(b) (2) .

If the landfill is permanently closed, a closure notification shall be submitted to the Administrator as provided for in subpart WWW section 60.757(d) .

2. The paved and unpaved roadways and parking areas that are covered by this permit and subject to the terms and conditions of this permit are listed below:

paved roadways:

Access Road
East Bypass Road
West Bypass Road

paved parking areas:

Main Parking Lot

unpaved roadways:

Access Road
Haul Road
Leachate Road

unpaved parking areas:

Maintenance Building Parking Lot

3. 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 using a self propelled sweeper and mobile water tank w/spray bar at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
4. The permittee shall employ best available control measures on all unpaved roadways for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved roadways with water using a mobile water tank with spray bars at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing

other control measures to ensure compliance.

5. 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.
6. Any unpaved roadway, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled with the control measure(s) specified above for paved surfaces. Any unpaved roadway that takes the characteristics of a paved roadway due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways. Any unpaved roadway that is paved shall be subject to the visible emission limitation for paved roadways and parking areas.
7. 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.
8. 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.
9. For all waste materials except asbestos-containing materials:
 - (a) 20 percent opacity, as a 3-minute average; and
 - (b) use of reasonably available control measures, as defined in the "additional terms and conditions" section, to minimize or eliminate the emissions of fugitive dust.

For asbestos-containing materials:

- (a) no visible emissions; and
- (b) use of handling procedures and control measures, as defined in the "additional terms and

conditions" section C, to prevent the emissions of fugitive dust.

10. 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.

11. Authority to Enter

Pursuant to the authority in OAC rule 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.

B. OPERATIONAL RESTRICTIONS

1. The permittee is subject to 40 CFR, Part 60, subpart WWW. Specific operational standards for collection and control systems are contained in section 60.753 of this subpart. The permittee shall comply with all applicable requirements in this subpart.

2. Reasonably Available Control Measures for All Waste Materials Except Asbestos-Containing Materials

The permittee shall ensure that solid wastes are deposited, spread and compacted in such a manner as to minimize or prevent visible emissions of dust. All truckloads of solid waste shall be unloaded in a manner which will minimize the drop height of the solid wastes. Any dusty materials or wastes likely to become airborne shall be watered as necessary prior to or during dumping operations in order to minimize or eliminate visible emissions of fugitive dust. Watering shall be conducted in such a manner as to avoid the pooling of liquids and runoff. No dusty material shall be dumped during periods of high wind speed, unless the material has been treated to prevent fugitive dust emissions from becoming airborne.

3. Disposal Requirements for Asbestos-Containing Materials

- (a) There shall be no visible emissions from

asbestos-containing materials during on-site transportation, transfer, unloading, deposition or compacting operations.

- (b) The permittee shall inspect each load of asbestos-containing material delivered to the facility. The inspection shall consist of a visual examination to ensure that each shipment of asbestos-containing materials is received in intact, leak-tight containers labeled with appropriate hazard warning labels, the name of the waste generator, and the location of waste generation. The inspection also shall determine whether the waste shipment records accompany the consignment and accurately describe the waste material and quantity.

If on the basis of the inspection, the waste material is found to be improperly received, the load shall be disposed of in accordance with the procedures in the "Asbestos Spill Contingency Plan," and the discrepancy shall be noted on the waste shipment record.

- (c) Deposition and burial operations shall be conducted in a careful manner that prevents asbestos-containing waste materials from being broken up or dispersed before the materials are buried.
- (d) The permittee shall establish restricted access, adequate to deter the unauthorized entry of the general public and any unauthorized personnel, within 100 feet of the unloading, deposition, and burial areas for the asbestos-containing waste materials. A hazard warning shall be displayed on signs not less than 20 x 14 inches in size, posted so they are visible before entering an area with asbestos waste disposal operations in progress; or, alternatively, mark vehicles used to transport asbestos-containing waste materials with 21 x 14 inch signs so that the signs are displayed in such a manner and location that a person can easily read the legend. Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend:

DANGER
ASBESTOS DUST HAZARD
CANCER AND LUNG DISEASE HAZARD
Authorized Personnel Only

Notation

2.5 cm (1 inch) Sans Serif, Gothic or
Block
2.5 cm (1 inch) Sans Serif, Gothic or
Block
1.9 cm (3/4 inch) Sans Serif, Gothic or
Block
14 Point Gothic

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

- (e) The permittee shall cover and compact asbestos wastes in accordance with the following:
- (i) As soon as practicable after the placement of friable asbestos, but no later than the end of each working day, the asbestos-containing waste materials deposited at the site during the operating day shall be covered with at least 12 inches of non-asbestos-containing materials. Once the asbestos-containing materials are covered, the area may be compacted.
 - (ii) Care shall be taken to ensure that disposed asbestos shall not be re-excavated in subsequent operations. Any accidentally exposed material shall be immediately recovered in accordance with the provisions of condition (e)(i) above.
 - (iii) Asbestos-containing waste materials shall be separated from the landfill final grade by no less than 24 inches of compacted non-asbestos-

containing materials and a permanent cover of vegetation, or in accordance with current requirements for closure, whichever is more stringent.

(f) The permittee shall implement and maintain an "Asbestos Disposal Operating Procedure and Spill Contingency Plan" ("Plan") consisting of: authorized personnel training, inspection and disposal operating procedures, non-conforming load response procedures, inventory and maintenance procedures for safety and emissions control equipment, recordkeeping procedures, and emergency notification procedures. Authorized personnel shall be knowledgeable in the procedures, and the Plan shall be available for inspection at this facility at all times.

(g) Emissions control equipment shall be available for wetting and containing asbestos in the event of a release or non-conforming load disposal. All equipment required to implement the Plan shall be maintained in accordance with good engineering practices to ensure that the equipment is in a ready-to-use condition and in an appropriate location for use.

C. MONITORING AND/OR RECORDKEEPING REQUIREMENTS

1. The permittee is subject to 40 CFR, Part 60, subpart WWW. Specific monitoring and recordkeeping requirements are contained in sections 60.756 and 60.758, respectively of this subpart. The permittee shall comply with all applicable requirements in the subpart.
2. Except as otherwise provided in this section, the permittee shall perform inspections of the roadways and parking areas in accordance with the following frequencies:

<u>paved roadways and parking areas</u>	<u>minimum inspection frequency</u>
All	Daily during operation

unpaved roadways and parking areas

minimum
inspection
frequency

All

Daily during
operation

3. 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.
4. The permittee may, upon receipt of written approval from the appropriate Ohio EPA District Office or local air agency, 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.
5. 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.
6. The permittee shall maintain records of the following information:
 - (a) The waste shipment record form for each shipment of asbestos-containing materials.
 - (b) The location, depth and area, and quantity in cubic yards of all asbestos-containing materials within the disposal site, on a map or diagram of the disposal area.

D. REPORTING REQUIREMENTS

1. The permittee is subject to 40 CFR, Part 60, subpart WWW. Specific reporting requirements are contained in sections 60.757 of this subpart. The permittee shall comply with all applicable requirements in the subpart.
2. The permittee shall submit an annual emission report as described in additional special terms and conditions (A)(1) by April 15 the report shall cover the previous 12 month period.

The annual report is to be submitted to the following:

The Ohio Environmental Protection Agency, Air Quality Management and Planning, DAPC, P.O. Box 1049, Columbus Ohio 43216-1049.

The Ohio Environmental Protection Agency, Northwest District Office, Division of Air Pollution Control, 347 North Dunbridge Road, Bowling Green, Ohio, 43402.

3. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing 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 notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days following the end of the calendar month.

The permittee shall also submit an annual report which summarizes each occurrence described in (a.) and (b.) above for the previous calendar year. If no occurrences occurred, a report stating that fact is still required.

The annual report is to be submitted to The Ohio Environmental Protection Agency, Northwest District Office, Division of Air Pollution Control, 347 North Dunbridge Road, Bowling Green, Ohio, 43402.

4. The permittee shall submit quarterly reports summarizing the asbestos disposal activities. The reports shall contain the following information:
 - (a) The name, address and location of the facility; the calendar period covered by the report; and any changes in the methods of storage or the disposal operations.
 - (b) A list of all asbestos-containing waste consignments received including: the date received, the name of the waste generator, the name and location of the facility where the load originated, the quantity of asbestos, and any discrepancy or non-conformity discovered.

These quarterly reports shall be submitted no later than January 31, April 30, July 31 and October 31 and shall cover the previous calendar quarters.

As soon as possible and no longer than 30 days after receipt of the waste, the permittee shall send a copy of the signed waste shipment record to the waste generator.

Upon discovering a discrepancy between the quantity of waste designated on a waste shipment record and the quantity actually received, the permittee shall attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the State, local, district, or USEPA regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the appropriate Ohio EPA District Office or local air agency. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.

The permittee shall submit, upon closure of the facility, a copy of the records of the asbestos waste disposal locations and quantities.

The permittee shall notify the appropriate Ohio EPA District Office or local air agency in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the

original notification. The following information shall be included in the notice:

- (a) Scheduled starting and completion dates.
- (b) Reason for disturbing the waste.
- (c) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. (If deemed necessary, the Director may require changes in the proposed emission control procedures).
- (d) Location of any temporary storage site and the final disposal site.

The permittee shall notify the appropriate Ohio EPA District Office or local air agency of any load of asbestos-containing material which is rejected, or any non-conforming load disposed of in accordance with the "Asbestos Spill Contingency Plan." Notification shall be provided as soon as possible by a phone contact, followed in writing by the next working day. The written notification shall provide a copy of the waste shipment record ("WSR"), if available, or when waste is not shipped with a WSR, provide available information concerning vehicle identification, source of the load, a description of the load, nature of discrepancy, and the location of disposal. If possible, non-conforming loads of suspect friable material shall be detained, or the location of disposal protected from damage, until the Ohio EPA is informed and provided the opportunity to inspect.

Reports are to be submitted to The Ohio Environmental Protection Agency, Northwest District Office, Division of Air Pollution Control, 347 North Dunbridge Road, Bowling Green, Ohio, 43402.

E. TESTING REQUIREMENTS/COMPLIANCE DETERMINATION METHODS

Compliance with the emission limitation(s) in the Air Emission Summary shall be determined in accordance with the following method(s);

1. Compliance with the emission limitation for the paved and unpaved roadways and 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 Limitation: Uncontrolled
5110.0 lbs Methane/hr and 22300.0 TPY
32.7 lbs NMOC/hr and 143.0 TPY
0.95 lb Chlorine/hr and 4.15 TPY

Applicable Compliance Method: Emission estimates were calculated using USEPA's Landfill Air Emission Estimate Model version 1.0 and AP-42 emission factors and equations, from Section 2.4. Emission estimates are based on a maximum estimated 1.15×10^7 Mg of refuse in place after 20 years.

3. Emission Limitation: Fugitive after control.
1530.0 lbs Methane/hr and 6700.0 TPY
9.8 lbs NMOC/hr and 42.9 TPY
0.284 lb Chlorine/hr and 1.25 TPY

Applicable Compliance Method: Emission estimates were calculated using USEPA's Landfill Air Emission Estimate Model version 1.0 and AP-42 emission factors and equations, from Section 2.4. Emission estimates are based on a maximum estimated 1.15×10^7 Mg of refuse in place after 20 years. The following equation was used to calculate fugitive emissions:

$$CMx_{Fug} = (1 - y_{col}/100) CMx$$

CMx_{Fug} = Mass of fugitive uncollected emissions (ton/yr)

y_{col} = collection efficiency (70%-85%)

CMx = total mass of pollutant x generated (ton/yr)

4. Emission Limitation: Control equipment.
86.6 lbs Methane/hr and 379.0 TPY
0.555 lbs NMOC/hr and 2.43 TPY
0.017 lb HCL/hr and 0.073 TPY

Applicable Compliance Method: Emission estimates were calculated using USEPA's Landfill Air Emission Estimate Model version 1.0 and AP-42 emission factors and equations, from Section 2.4. Emission estimates are based on a maximum estimated 1.15×10^7 Mg of refuse in place after 20 years. The following equation was used to calculate fugitive emissions:

$$CMxc = y_{col}/100 \times (1 - y_{cnt}/100) CMx$$

CM_xc = Mass of pollutant passing through control (ton/yr)

y_{col} = collection efficiency (70%-85%)

y_{cnt} = control efficiency (98%)

CM_x = Total mass of pollutant x generated (ton/yr)

5. Emission Limitation: Control equipment
21.2 lbs CO/Hr and 92.8 TPY

Applicable Compliance Method: Emission estimates were calculated assuming an open flare and a maximum methane emission rate 3.101×10^7 m³/yr and a collection rate of 85%. Emission estimates are based on 57.28 MMBTU/hr and a Carbon Monoxide emission rate is 0.37 lbs/MMBTU. Emission factors are based on SWANA Landfill gas emission rate obtained from the 20th annual Landfill gas symposium March 25, 1996.

6. Emission Limitation: Control equipment
26.5 lbs NO_x/hr and 116.0 TPY

Applicable Compliance Method: Emission estimates were calculated using the maximum methane emission rate 3.101×10^7 m³/yr and a capture efficiency of 85%. The Nitrogen Dioxide emission rate is 0.24 kg/hr/dscm/min based on internal combustion engine emission factor from AP-42, Table 2.4-4.

7. Emission Limitation: Control equipment
3.32 lbs SO₂/hr and 14.55 TPY

Applicable Compliance Method: Emission estimates are based on a maximum methane emission rate of 3.101×10^7 m³/yr. Using USEPA's Landfill Air Emission Estimate Model version 1.0 a value of 46.9 ppmv for reduced sulfur was assumed. AP-42 equations (3) and (4) from Section 2.4-4 were then used to determine sulfur emissions.

8. Emission Limitation: Control equipment
5.08 lbs PE/hr and 22.3 TPY

Applicable Compliance Method: Emission estimates were calculated using USEPA's Landfill Air Emission Estimate Model version 1.0 and AP-42 emission factors and equations, from Section 2.4. Emission estimates are based on maximum estimated 1.15×10^7 Mg of refuse in place after 20 years.

F. MISCELLANEOUS REQUIREMENTS

1. None.