



**Missouri Department of Natural Resources**  
**Air Pollution Control Program**

## **PART 70**

# **PERMIT TO OPERATE**

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to operate the air contaminant source(s) described below, in accordance with the laws, rules, and conditions set forth herein.

**Operating Permit Number:** OP2013-014  
**Expiration Date:** MAR 18 2018  
**Installation ID:** 095-0273  
**Project Number:** 2011-12-057

**Installation Name and Address**

Rumble I and II Recycling and Disposal Facility  
2013 North Courtney Road  
Sugar Creek, MO 64054  
Jackson County

**Parent Company's Name and Address**


Waste Management of Missouri, Inc.  
720 East Butterfield Road  
Lombard, IL 60148

**Installation Description:**

This installation is a closed municipal solid waste disposal facility consisting of two separate landfill areas, each about 45 acres in area. Rumble I opened in 1967, and has a capacity of 1.5 million m<sup>3</sup>. Rumble II opened in 1983 and has a capacity of 2.16 million m<sup>3</sup>. There was a capacity expansion after May 30, 1991. The landfills are controlled by an active gas collection system installed in 1998. (See Construction Permit 1298-011.). Most of the gas is piped to an adjacent property for use in a cement manufacturing process. In cold weather, some of the gas is used by a 1.1 MMBtu landfill gas boiler to heat a greenhouse. When the cement manufacturing processes closes down for maintenance, the gas is sent to a ten-inch candlestick flare. The installation is subject to 40 CFR 60 Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills and 40 CFR 63 Subpart AAAA- National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills.

MAR 19 2013

Effective Date

  
Director or Designee  
Department of Natural Resources

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## I. Installation Description and Equipment Listing

### INSTALLATION DESCRIPTION

This installation is a closed municipal solid waste disposal facility consisting of two separate landfill areas, each about 45 acres in area. Rumble I opened in 1967, and has a capacity of 1.5 million m<sup>3</sup>. Rumble II opened in 1983, and has a capacity of 2.16 million m<sup>3</sup>. There was a capacity expansion after May 30, 1991. The landfills are controlled by an active gas collection system installed in 1998. (See Construction Permit 1298-011.). Most of the gas is piped to an adjacent property for use in a cement manufacturing process. In cold weather, some of the gas is used by a 1.1 MMBtu landfill gas boiler to heat a greenhouse. When the cement manufacturing processes closes down for maintenance, the gas is sent to a 10-inch candlestick flare.

The installation is subject to 40 CFR 60 Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills and 40 CFR 63 Subpart AAAA- National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills.

<b>Reported Air Pollutant Emissions, tons per year</b>					
Pollutants	2010	2009	2008	2007	2006
Particulate Matter ≤ Ten Microns (PM <sub>10</sub> )	1.05	1.02	0.52	0.22	0.46
Particulate Matter ≤ 2.5 Microns (PM <sub>2.5</sub> )	1.05	1.02	0.52	0.22	0.46
Sulfur Oxides (SO <sub>x</sub> )	0.87	0.84	0.43	0.19	0.38
Nitrogen Oxides (NO <sub>x</sub> )	2.49	2.40	1.24	0.53	1.10
Volatile Organic Compounds(VOC)	0.10	0.39	0.35	2.16	2.01
Carbon Monoxide (CO)	46.28	44.68	22.83	9.67	20.23
Lead (Pb)	0	0	0	0	0
Hazardous Air Pollutants (HAPs)	0.04	0.04	0.04	0.22	0.44
Ammonia (NH <sub>3</sub> )	0	0	0	0	0

### **EMISSION UNITS WITH LIMITATIONS**

The following list provides a description of the equipment at this installation that emits air pollutants and that are identified as having unit-specific emission limitations.

<u>Emission Unit #</u>	<u>Description of Emission Unit</u>
EP-01, EP-08	Rumble I and II Solid Waste Landfills With Gas Collection System
EP-09	1620 SCFM Open Flare
EP-10	Landfill Gas Fired Boiler for heating greenhouse, a Dietrich Model GT408A rated at 1.1 MMBtu/hr, and installed in December 2003 to replace the boiler installed in 1998

### **EMISSION UNITS WITHOUT LIMITATIONS**

The following list provides a description of the equipment that does not have unit specific limitations at the time of permit issuance.

<u>Description of Emission Source</u>
Fugitive emissions related to repairs made to the final cover
15,000-gallon Highland leachate storage tank
Access roads (used for maintenance only, since the landfill is closed)

### **DOCUMENTS INCORPORATED BY REFERENCE**

These documents have been incorporated by reference into this permit.

None

## **II. Plant Wide Emission Limitations**

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

None

### III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

<b>Landfill, LFG fired flare and boiler</b>	
<b>Emission Unit</b>	<b>Description</b>
EP-01, EP-08	Rumble I and II Solid Waste Landfills With Gas Collection System
EP-09	1620 SCFM Open Flare. Flare Mfr: LFG Specialties, LLC, Model # PCFR 1020I10/1250
EP-10	Landfill Gas Fired Boiler for heating greenhouse, a Dietrich Model GT408A rated at 1.1 MMBtu/hr, and installed in December 2003

**PERMIT CONDITION (Emission Units EP-01, EP-08, EP-09, and EP-10)-001**  
**10 CSR 10-6.070 New Source Performance Regulations and**  
**40 CFR Part 60, Subpart A General Provisions and Subpart WWW -Standards of Performance**  
**for Municipal Solid Waste Landfills**

**Emission Limitations:**

1. Each owner or operator of an MSW landfill having a design capacity less than 2.5 million megagrams by mass or 2.5 million cubic meters by volume shall submit an initial design capacity report to the Administrator as provided in §60.757(a). The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. Any density conversions shall be documented and submitted with the report. Submittal of the initial design capacity report shall fulfill the requirements of this subpart except as provided for in Paragraphs (a)(1) and (a)(2) of this section. [§60.752(a)]
  - (a) The owner or operator shall submit to the Administrator an amended design capacity report, as provided for in §60.757(a)(3). [§60.752(a)(1)]
  - (b) When an increase in the maximum design capacity of a landfill exempted from the provisions of §60.752(b) through §60.759 of this subpart on the basis of the design capacity exemption in Paragraph (a) of this section results in a revised maximum design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, the owner or operator shall comply with the provision of Paragraph (b) of this section. [§60.752(a)(2)]
2. Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, shall comply with Paragraph (b)(2) of this section. The owner or operator of an MSW landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters is subject to part 70 or 71 permitting requirements. [§60.752(b)]
  - (a) If the calculated NMOC emission rate is less than 50 megagrams per year, the owner or operator shall: [§60.752(b)(1)]
    - (i) Submit an annual emission report to the Administrator, except as provided for in §60.757(b)(1)(ii); and [§60.752(b)(1)(i)]

- (ii). 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. [§60.752(b)(1)(ii)]
  - A. If the NMOC emission rate, upon recalculation required in Paragraph (b)(1)(ii) of this section, is equal to or greater than 50 megagrams per year, the owner or operator shall install a collection and control system in compliance with Paragraph (b)(2) of this section. [§60.752(b)(1)(ii)(A)]
  - B. If the landfill is permanently closed, a closure notification shall be submitted to the Administrator as provided for in §60.757(d). [§60.752(b)(1)(ii)(B)]
- (b) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall: [§60.752(b)(2)]
  - (i) Submit a collection and control system design plan prepared by a professional engineer to the Administrator within 1 year: [§60.752(b)(2)(i)]
    - A. The collection and control system as described in the plan shall meet the design requirements of Paragraph (b)(2)(ii) of this section. [§60.752(b)(2)(i)(A)]
    - B. The collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of §§60.753 through 60.758 proposed by the owner or operator. [§60.752(b)(2)(i)(B)]
    - C. The collection and control system design plan shall either conform with specifications for active collection systems in §60.759 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to §60.759. [§60.752(b)(2)(i)(C)]
    - D. The Administrator shall review the information submitted under Paragraphs (b)(2)(i)(A),(B) and (C) of this section and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems. [§60.752(b)(2)(i)(D)]
  - (ii) Install a collection and control system that captures the gas generated within the landfill as required by Paragraphs (b)(2)(ii)(A) or (B) and (b)(2)(iii) of this section within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the emission rate is less than 50 megagrams per year, as specified in §60.757(c)(1) or (2). [§60.752(b)(2)(ii)]
    - A. An active collection system shall: [§60.752(b)(2)(ii)(A)]
      - 1. 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; [§60.752(b)(2)(ii)(A)(1)]
      - 2. Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of: [§60.752(b)(2)(ii)(A)(2)]
        - i. 5 years or more if active; or [§60.752(b)(2)(ii)(A)(2)(i)]
        - ii. 2 years or more if closed or at final grade. [§60.752(b)(2)(ii)(A)(2)(ii)]
      - 3. Collect gas at a sufficient extraction rate; [§60.752(b)(2)(ii)(A)(3)]
      - 4. Be designed to minimize off-site migration of subsurface gas. [§60.752(b)(2)(ii)(A)(4)]
    - B. A passive collection system shall: [§60.752(b)(2)(ii)(B)]

1. Comply with the provisions specified in Paragraphs (b)(2)(ii)(A)( 1 ), ( 2 ), and (2)(ii)(A)( 4 ) of this section. [§60.752(b)(2)(ii)(B)(1)]
      2. Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners shall be installed as required under §258.40. [§60.752(b)(2)(ii)(B)(2)]
    - (iii) Route all the collected gas to a control system that complies with the requirements in either Paragraph (b)(2)(iii) (A), (B) or (C) of this section. [§60.752(b)(2)(iii)]
      - A. An open flare designed and operated in accordance with §60.18 except as noted in §60.754(e); [§60.752(b)(2)(iii)(A)]
      - B. A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce 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 3 percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in §60.754(d). [§60.752(b)(2)(iii)(B)]
        1. If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone. [§60.7529b)(2)(iii)(B)(1)]
        2. The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in §60.756; [§60.752(b)(2)(iii)(B)(2)]
      - C. Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of Paragraph (b)(2)(iii) (A) or (B) of this section. [§60.752(b)(2)(iii)(C)]
    - (iv) Operate the collection and control device installed to comply with this subpart in accordance with the provisions of §§60.753, 60.755 and 60.756. [§60.752(b)(2)(iv)]
    - (v) The collection and control system may be capped or removed provided that all the conditions of Paragraphs (b)(2)(v) (A), (B), and (C) of this section are met: [§60.752(b)(2)(v)]
      - A. The landfill shall be a closed landfill as defined in §60.751 of this subpart. A closure report shall be submitted to the Administrator as provided in §60.757(d); [§60.752(b)(2)(v)(A)]
      - B. The collection and control system shall have been in operation a minimum of 15 years; and [§60.752(b)(2)(v)(B)]
      - C. Following the procedures specified in §60.754(b) of this subpart, the calculated NMOC gas produced by the landfill shall be less than 50 megagrams 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. [§60.752(b)(2)(v)(C)]
3. When a MSW landfill subject to this subpart is closed, the owner or operator is no longer subject to the requirement to maintain an operating permit under part 70 or 71 of this chapter for the landfill if the landfill is not otherwise subject to the requirements of either part 70 or 71 and if either of the following conditions are met: [§60.752(d)]
  - (a) The landfill was never subject to the requirement for a control system under Paragraph (b)(2) of this section; or [§60.752(d)(1)]
  - (b) The owner or operator meets the conditions for control system removal specified in Paragraph (b)(2)(v) of this section. [§60.752(d)(2)]



**Operational standards for collection and control systems:**

Each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of §60.752(b)(2)(ii) of this subpart shall:

1. Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for: [§60.753(a)]
  - (a) five years or more if active; or [§60.753(a)(1)]
  - (b) two years or more if closed or at final grade; [§60.753(a)(2)]
2. Operate the collection system with negative pressure at each wellhead except under the following conditions: [§60.753(b)]
  - (a) A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in §60.757(f)(1); [§60.753(b)(1)]
  - (b) Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan; [§60.753(b)(2)]
  - (c) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Administrator; [§60.753(b)(3)]
3. Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 °C and with either a nitrogen level less than 20 percent or an oxygen level less than five percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens. [§60.753(c)]
  - (a) The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart. [§60.753(c)(1)]
  - (b) Unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart, the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that: [§60.753(c)(2)]
    - (i) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span; [§60.753(c)(2)(i)]
    - (ii) A data recorder is not required; [§60.753(c)(2)(ii)]
    - (iii) Only two calibration gases are required, a zero and span, and ambient air may be used as the span; [§60.753(c)(2)(iii)]
    - (iv) A calibration error check is not required; [§60.753(c)(2)(iv)]
    - (v) The allowable sample bias, zero drift, and calibration drift are ±10 percent. [§60.753(c)(2)(v)]
4. Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the 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. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing. [§60.753(d)]
5. Operate the system such that all collected gases are vented to a control system designed and operated in compliance with §60.752(b)(2)(iii). 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 1 hour; and [§60.753(e)]

6. Operate the control or treatment system at all times when the collected gas is routed to the system. [§60.753(f)]
7. If monitoring demonstrates that the operational requirements in Paragraphs (b), (c), or (d) of this section are not met, corrective action shall be taken as specified in §60.755(a)(3) through (5) or §60.755(c) of this subpart. If corrective actions are taken as specified in §60.755, the monitored exceedance is not a violation of the operational requirements in this section. [§60.753(g)]

**Specifications for active collection systems:**

1. Each owner or operator seeking to comply with §60.752(b)(2)(i) shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the Administrator as provided in §60.752(b)(2)(i)(C) and (D): [§60.759(a)]
  - (a) The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat. [§60.759(a)(1)]
  - (b) The sufficient density of gas collection devices determined in Paragraph (a)(1) of this section shall address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior. [§60.759(a)(2)]
  - (c) The placement of gas collection devices determined in Paragraph (a)(1) of this section shall control all gas producing areas, except as provided by Paragraphs (a)(3)(i) and (a)(3)(ii) of this section. [§60.759(a)(3)]
    - (i) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under §60.758(d). The documentation shall provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and shall be provided to the Administrator upon request. [§60.759(a)(3)(i)]
    - (ii) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the Administrator upon request. A separate NMOC emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the following equation: [§60.759(a)(3)(ii)]

$$Q_i = 2kL_oM_i(e^{-kt_i})(C_{NMOC})(3.6 \times 10^{-9})$$

where,

= NMOC emission rate from the  $i^{\text{th}}$  section, megagrams per year

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

= methane generation potential, cubic meters per megagram solid waste

= mass of the degradable solid waste in the  $i^{\text{th}}$  section, megagram

$t_i$  = age of the solid waste in the  $i^{\text{th}}$  section, years

= concentration of nonmethane organic compounds, parts per million by volume

$3.6 \times 10^{-9}$  = conversion factor

- (iii) The values for  $k$  and  $d$  determined in field testing shall be used if field testing has been performed in determining the NMOC emission rate or the radii of influence (this distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for  $k$ , and provided in §60.754(a)(1) or the alternative values from §60.754(a)(5) shall be used. The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in Paragraph (a)(3)(i) of this section. [§60.759(a)(3)(iii)]
2. Each owner or operator seeking to comply with §60.752(b)(2)(i)(A) shall construct the gas collection devices using the following equipment or procedures: [§60.759(b)]
- (a) The landfill gas extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration. [§60.759(b)(1)]
- (b) Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations. [§60.759(b)(2)]
- (c) Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness. [§60.759(b)(3)]
3. Each owner or operator seeking to comply with §60.752(b)(2)(i)(A) shall convey the landfill gas to a control system in compliance with §60.752(b)(2)(iii) through the collection header pipe(s). The gas mover equipment shall be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures: [§60.759(c)]
- (a) For existing collection systems, the flow data shall be used to project the maximum flow rate. If no flow data exists, the procedures in Paragraph (c)(2) of this section shall be used. [§60.759(c)(1)]
- (b) For new collection systems, the maximum flow rate shall be in accordance with §60.755(a)(1). [§60.759(c)(2)]

**Test methods and procedures:**

1. After the installation of a collection and control system in compliance with §60.755, the owner or operator shall calculate the NMOC emission rate for purposes of determining when the system can be removed as provided in §60.752(b)(2)(v), using the following equation: [§60.754(b)]

$$M_{NMOC} = 1.89 \times 10^{-3} Q_{LFG} C_{NMOC}$$

where,

= mass emission rate of NMOC, megagrams per year

= flow rate of landfill gas, cubic meters per minute

= NMOC concentration, parts per million by volume as hexane

- (a) The flow rate of landfill gas,  $Q_{LFG}$ , shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of Appendix A of this part. [§60.754(b)(1)]
  - (b) The average NMOC concentration,  $C_{NMOC}$ , 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 Appendix A of this part. If using Method 18 of Appendix A of this part, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The landfill owner or operator shall divide the NMOC concentration from Method 25C of Appendix A of this part by six to convert from as carbon to as hexane. [§60.754(b)(2)]
  - (c) The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Administrator. [§60.754(b)(3)]
2. When calculating emissions for PSD purposes, the owner or operator of each MSW landfill subject to the provisions of this subpart shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in §§51.166 or 52.21 of this chapter using AP-42 or other approved measurement procedures. [§60.754(c)]
  3. For the performance test required in §60.752(b)(2)(iii)(B), Method 25, 25C, or Method 18 of Appendix A of this part must be used to determine compliance with the 98 weight-percent efficiency or the 20 ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Administrator as provided by §60.752(b)(2)(i)(B). Method 3 or 3A shall be used to determine oxygen for correcting the NMOC concentration as hexane to 3 percent. In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), Method 25A should be used in place of Method 25. If using Method 18 of Appendix A of this part, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency: [§60.754(d)]

$$Control\ Efficiency = \frac{(NMOC_{in} - NMOC_{out})}{NMOC_{in}}$$

where,

= mass of NMOC entering control device

= mass of NMOC exiting control device

4. For the performance test required in §60.752(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in §60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are

determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under §60.18(f)(4). [§60.754(e)]

**Compliance provisions:**

1. Except as provided in §60.752(b)(2)(i)(B), the specified methods in Paragraphs (a)(1) through (a)(6) of this section shall be used to determine whether the gas collection system is in compliance with §60.752(b)(2)(ii). [§60.755(a)]

(a) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with §60.752(b)(2)(ii)(A)(1), one of the following equations shall be used. The k and kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42) or other site specific values demonstrated to be appropriate and approved by the Administrator. If k has been determined as specified in §60.754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure. [§60.755(a)(1)]

(i) For sites with unknown year-to-year solid waste acceptance rate: [§60.755(a)(1)(i)]

$$Q_m = 2L_oR(e^{-kc} - e^{-kt})$$

where,

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

= 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 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<sup>-kc</sup> = 1)

(ii) For sites with known year-to-year solid waste acceptance rate: [§60.755(a)(1)(ii)]

$$Q_m = \sum_{i=1}^n 2kL_oM_i(e^{-kti})$$

where,

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

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

= 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

(iii) If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in Paragraphs (a)(1) (i) and (ii) of this section. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in Paragraphs (a)(1) (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. [§60.755(a)(1)(iii)]

(b) For the purposes of determining sufficient density of gas collectors for compliance with §60.752(b)(2)(ii)(A)(2), the owner or operator shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Administrator, capable of controlling

and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards. [§60.755(a)(2)]

- (c) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with §60.752(b)(2)(ii)(A)( 3 ), the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under §60.753(b). 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 measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval. [§60.755(a)(3)]
  - (d) Owners or operators are not required to expand the system as required in Paragraph (a)(3) of this section during the first 180 days after gas collection system startup. [§60.755(a)(4)]
  - (e) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator shall monitor each well monthly for temperature and nitrogen or oxygen as provided in §60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within five calendar days. If correction of the exceedance cannot 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. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval. [§60.755(a)(5)]
  - (f) An owner or operator seeking to demonstrate compliance with §60.752(b)(2)(ii)(A)( 4 ) through the use of a collection system not conforming to the specifications provided in §60.759 shall provide information satisfactory to the Administrator as specified in §60.752(b)(2)(i)(C) demonstrating that off-site migration is being controlled. [§60.755(a)(6)]
2. For purposes of compliance with §60.753(a), each owner or operator of a controlled landfill shall place each well or design component as specified in the approved design plan as provided in §60.752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of: [§60.755(b)]
    - (a) five years or more if active; or [§60.755(b)(1)]
    - (b) two years or more if closed or at final grade. [§60.755(b)(2)]
  3. The following procedures shall be used for compliance with the surface methane operational standard as provided in §60.753(d). [§60.755(c)]
    - (a) After installation of the collection system, the owner or operator shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in Paragraph (d) of this section. [§60.755(c)(1)]
    - (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. [§60.755(c)(2)]
    - (c) Surface emission monitoring shall be performed in accordance with Section 4.3.1 of Method 21 of Appendix A of this part, except that the probe inlet shall be placed within five to ten

centimeters of the ground. Monitoring shall be performed during typical meteorological conditions. [§60.755(c)(3)]

- (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 in Paragraphs (c)(4) (i) through (v) of this section shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of §60.753(d). [§60.755(c)(4)]
    - (i) The location of each monitored exceedance shall be marked and the location recorded. [§60.755(c)(4)(i)]
    - (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 re-monitored within 10 calendar days of detecting the exceedance. [§60.755(c)(4)(ii)]
    - (iii) If the re-monitoring 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 re-monitoring shows a third exceedance for the same location, the action specified in Paragraph (c)(4)(v) of this section shall be taken, and no further monitoring of that location is required until the action specified in Paragraph (c)(4)(v) has been taken. [§60.755(c)(4)(iii)]
    - (iv) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the ten-day re-monitoring specified in Paragraph (c)(4) (ii) or (iii) of this section shall be re-monitored one month from the initial exceedance. If the 1-month re-monitoring 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 re-monitoring shows an exceedance, the actions specified in Paragraph (c)(4) (iii) or (v) shall be taken. [§60.755(c)(4)(iv)]
    - (v) For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, 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 Administrator for approval. [§60.755(c)(4)(v)]
  - (e) The owner or operator shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis. [§60.755(c)(5)]
4. Each owner or operator seeking to comply with the provisions in Paragraph (c) of this section shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices: [§60.755(d)]
    - (a) The portable analyzer shall meet the instrument specifications provided in Section 3 of Method 21 of Appendix A of this part, except that “methane” shall replace all references to VOC. [§60.755(d)(1)]
    - (b) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air. [§60.755(d)(2)]
    - (c) To meet the performance evaluation requirements in Section 3.1.3 of Method 21 of Appendix A of this part, the instrument evaluation procedures of Section 4.4 of Method 21 of Appendix A of this part shall be used. [§60.755(d)(3)]
    - (d) The calibration procedures provided in Section 4.2 of Method 21 of Appendix A of this part shall be followed immediately before commencing a surface monitoring survey. [§60.755(d)(4)]
  5. The provisions of this subpart apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed five

days for collection systems and shall not exceed one hour for treatment or control devices.  
[§60.755(e)]

**Monitoring:**

Except as provided in §60.752(b)(2)(i)(B),

1. Each owner or operator seeking to comply with §60.752(b)(2)(ii)(A) for an active gas collection system shall install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and: [§60.756(a)]
  - (a) Measure the gauge pressure in the gas collection header on a monthly basis as provided in §60.755(a)(3); and [§60.756(a)(1)]
  - (b) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in §60.755(a)(5); and [§60.756(a)(2)]
  - (c) Monitor temperature of the landfill gas on a monthly basis as provided in §60.755(a)(5). [§60.756(a)(3)]
2. Each owner or operator seeking to comply with §60.752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment. [§60.756(b)]
  - (a) A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of  $\pm 1$  percent of the temperature being measured expressed in degrees Celsius or  $\pm 0.5$  degrees Celsius, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity equal to or greater than 44 megawatts. [§60.756(b)(1)]
  - (b) A device that records flow to or bypass of the control device. The owner or operator shall either: [§60.756(b)(2)]
    - (i) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or [§60.7569(b)(2)(i)]
    - (ii) 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. [§60.756(b)(2)(ii)]
3. Each owner or operator seeking to comply with §60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment: [§60.756(c)]
  - (a) A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame. [§60.756(c)(1)]
  - (b) A device that records flow to or bypass of the flare. The owner or operator shall either: [§60.756(c)(2)]
  - (c) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or [§60.756(c)(2)(i)]
  - (d) 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. [§60.756(c)(2)(ii)]
4. Each owner or operator seeking to install a collection system that does not meet the specifications in §60.759 or seeking to monitor alternative parameters to those required by §60.753 through §60.756 shall provide information satisfactory to the Administrator as provided in §60.752(b)(2)(i) (B) and (C) describing the design and operation of the collection system, the operating parameters that would



indicate proper performance, and appropriate monitoring procedures. The Administrator may specify additional appropriate monitoring procedures. [§60.756(e)]

5. Each owner or operator seeking to demonstrate compliance with §60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in §60.755(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring. [§60.756(f)]

**Reporting requirements:**

Except as provided in §60.752(b)(2)(i)(B),

1. Each owner or operator subject to the requirements of this subpart shall submit an initial design capacity report to the Administrator. [§60.757(a)]
  - (a) The initial design capacity report shall fulfill the requirements of the notification of the date construction is commenced as required by §60.7(a)(1) and shall be submitted no later than: [§60.757(a)(1)]
    - (i) June 10, 1996, for landfills that commenced construction, modification, or reconstruction on or after May 30, 1991, but before March 12, 1996, or [§60.757(a)(1)(i)]
    - (ii) Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996. [§60.757(a)(1)(ii)]
  - (b) The initial design capacity report shall contain the following information: [§60.757(a)(2)]
    - (i) A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the permit issued by the State, local, or tribal agency responsible for regulating the landfill. [§60.757(a)(2)(i)]
    - (ii) The maximum design capacity of the landfill. Where the maximum design capacity is specified in the permit issued by the state, local, or tribal agency responsible for regulating the landfill, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity shall be calculated using good engineering practices. The calculations shall be provided, along with the relevant parameters as part of the report. The state, tribal, local agency or Administrator may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill. [§60.757(a)(2)(ii)]
  - (c) An amended design capacity report shall be submitted to the Administrator providing notification of an increase in the design capacity of the landfill, within 90 days of an increase in the maximum design capacity of the landfill to or above 2.5 million megagrams and 2.5 million cubic meters. This increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required in §60.758(f). [§60.757(a)(3)]
2. Each owner or operator subject to the requirements of this subpart shall submit an NMOC emission rate report to the Administrator initially and annually thereafter, except as provided for in Paragraphs (b)(1)(ii) or (b)(3) of this section. The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate. [§60.757(b)]

- (a) The NMOC emission rate report shall contain an annual or five-year estimate of the NMOC emission rate calculated using the formula and procedures provided in §60.754(a) or (b), as applicable. [§60.757(b)(1)]
- (i) The initial NMOC emission rate report may be combined with the initial design capacity report required in Paragraph (a) of this section and shall be submitted no later than indicated in Paragraphs (b)(1)(i)(A) and (B) of this section. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided for in Paragraphs (b)(1)(ii) and (b)(3) of this section. [§60.757(b)(1)(i)]
- A. June 10, 1996, for landfills that commenced construction, modification, or reconstruction on or after May 30, 1991, but before March 12, 1996, or [§60.757(b)(1)(i)(A)]
- B. Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996. [§60.757(b)(1)(i)(B)]
- (ii) If the estimated NMOC emission rate as reported in the annual report to the Administrator is less than 50 megagrams per year in each of the next five consecutive years, the owner or operator may elect to submit an estimate of the NMOC emission rate for the next five-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 five years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Administrator. This estimate shall be revised at least once every five years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the five-year estimate, a revised five-year estimate shall be submitted to the Administrator. The revised estimate shall cover the five-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate. [§60.757(b)(1)(ii)]
- (b) The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or five-year emissions. [§60.757(b)(2)]
- (c) Each owner or operator subject to the requirements of this subpart is exempted from the requirements of Paragraphs (b)(1) and (2) of this section, after the installation of a collection and control system in compliance with §60.752(b)(2), during such time as the collection and control system is in operation and in compliance with §§60.753 and 60.755. [§60.757(b)(3)]
3. Each owner or operator subject to the provisions of §60.752(b)(2)(i) shall submit a collection and control system design plan to the Administrator within one year of the first report required under Paragraph (b) of this section in which the emission rate equals or exceeds 50 megagrams per year, except as follows: [§60.757(c)]
- (a) If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in §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 recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year. [§60.757(c)(1)]
- (b) If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in §60.754(a)(4), and the resulting NMOC emission rate is less than 50 Mg/yr, 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. The revised NMOC emission rate report based on the provisions of §60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Administrator within one year of the first calculated emission rate exceeding 50 megagrams per year. [§60.757(c)(2)]
4. Each owner or operator of a controlled landfill shall submit a closure report to the Administrator within 30 days of waste acceptance cessation. The Administrator may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the Administrator, no additional wastes may be placed into the landfill without filing a notification of modification as described under §60.7(a)(4). [§60.757(d)]
  5. Each owner or operator of a controlled landfill shall submit an equipment removal report to the Administrator 30 days prior to removal or cessation of operation of the control equipment. [§60.757(e)]
    - (a) The equipment removal report shall contain all of the following items: [§60.757(e)(1)]
      - (i) A copy of the closure report submitted in accordance with Paragraph (d) of this section; [§60.757(e)(1)(i)]
      - (ii) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and [§60.757(e)(1)(ii)]
      - (iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year. [§60.757(e)(1)(iii)]
    - (b) The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in §60.752(b)(2)(v) have been met. [§60.757(e)(2)]
  6. Each owner or operator of a landfill seeking to comply with §60.752(b)(2) using an active collection system designed in accordance with §60.752(b)(2)(ii) shall submit to the Administrator annual reports of the recorded information in (f)(1) through (f)(6) of this paragraph. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under §60.8. For enclosed combustion devices and flares, reportable exceedances are defined under §60.758(c). [§60.757(f)]
    - (a) Value and length of time for exceedance of applicable parameters monitored under §60.756(a), (b), (c), and (d). [§60.757(f)(1)]
    - (b) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under §60.756. [§60.757(f)(2)]
    - (c) Description and duration of all periods when the control device was not operating for a period exceeding one hour and length of time the control device was not operating. [§60.757(f)(3)]
    - (d) All periods when the collection system was not operating in excess of five days. [§60.757(f)(4)]
    - (e) The location of each exceedance of the 500 parts per million methane concentration as provided in §60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month. [§60.757(f)(5)]
    - (f) The date of installation and the location of each well or collection system expansion added pursuant to Paragraphs (a)(3), (b), and (c)(4) of §60.755. [§60.757(f)(6)]
  7. Each owner or operator seeking to comply with §60.752(b)(2)(iii) shall include the following information with the initial performance test report required under §60.8: [§60.757(g)]
    - (a) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations

of any areas excluded from collection and the proposed sites for the future collection system expansion; [§60.757(g)(1)]

- (b) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based; [§60.757(g)(2)]
- (c) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material; [§60.757(g)(3)]
- (d) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area; and [§60.757(g)(4)]
- (e) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and [§60.757(g)(5)]
- (f) The provisions for the control of off-site migration. [§60.757(g)(6)]

**Recordkeeping requirements:**

- 1. Except as provided in §60.752(b)(2)(i)(B), each owner or operator of an MSW landfill subject to the provisions of §60.752(b) shall keep for at least five years up-to-date, readily accessible, on-site records of the design capacity report which triggered §60.752(b), 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 paper copy or electronic formats are acceptable. [§60.758(a)]
- 2. Except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in Paragraphs (b)(1) through (b)(4) of this section as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of five years. Records of the control device vendor specifications shall be maintained until removal. [§60.758(b)]
  - (a) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(ii): [§60.758(b)(1)]
    - (i) The maximum expected gas generation flow rate as calculated in §60.755(a)(1). The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Administrator. [§60.758(b)(1)(i)]
    - (ii) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in §60.759(a)(1). [§60.758(b)(1)(ii)]
  - (b) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(iii) through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity equal to or greater than 44 megawatts: [§60.758(b)(2)]
    - (i) The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test. [§60.758(b)(2)(i)]
    - (ii) The percent reduction of NMOC determined as specified in §60.752(b)(2)(iii)(B) achieved by the control device. [§60.758(b)(2)(ii)]
  - (c) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(iii)(B)( 1 ) through use of a boiler or process heater of any size: a description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing. [§60.758(b)(3)]

- (d) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in §60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent. [§60.758(b)(4)]
3. Except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill subject to the provisions of this subpart shall keep for five years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in §60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. [§60.758(c)]
- (a) The following constitute exceedances that shall be recorded and reported under §60.757(f): [§60.758(c)(1)]
- (i) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all three-hour periods of operation during which the average combustion temperature was more than 28 °C below the average combustion temperature during the most recent performance test at which compliance with §60.752(b)(2)(iii) was determined. [§60.758(c)(1)(i)]
- (ii) For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under Paragraph (b)(3) of this section.
- (b) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under §60.756. [§60.758(c)(2)]
- (c) Each owner or operator subject to the provisions of this subpart who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with §60.752(b)(2)(iii) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other state, local, tribal, or federal regulatory requirements.) [§60.758(c)(3)]
- (d) Each owner or operator seeking to comply with the provisions of this subpart by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under §60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent. [§60.758(c)(4)]
4. Except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector. [§60.758(d)]
- (a) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under §60.755(b). [§60.758(d)(1)]
- (b) Each owner or operator subject to the provisions of this subpart shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or

- nondegradable waste excluded from collection as provided in §60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in §60.759(a)(3)(ii). [§60.758(d)(2)]
5. Except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall keep for at least five years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in §60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance. [§60.758(e)]
  6. Reports of any deviations from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section IV of this permit.

**PERMIT CONDITION (Emission Units EP-01, EP-08, EP-09, and EP-10)-002**  
**10 CSR 10-6.075 Maximum Achievable Control Technology Regulations and**  
**40 CFR Part 63, Subpart A General Provisions and Subpart AAAA -National Emission**  
**Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills**

**Emission Limitations:**

1. The permittee shall comply with the requirements of 40 CFR Part 60, Subpart WWW. [§63.1955(a)(1)]
2. If you are required by 40 CFR 60.752(b)(2) of Subpart WWW, the Federal plan, or an EPA approved and effective State or tribal plan to install a collection and control system, you must comply with the requirements in §§63.1960 through 63.1985 and with the general provisions of this part specified in Table 1 of this subpart. [§63.1955(b)]
3. For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, you must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been approved under 40 CFR Part 60 Subpart WWW or the Federal plan, or EPA approved and effective State or tribal plan, these alternatives can be used to comply with this subpart, except that all affected sources must comply with the SSM requirements in Subpart A of this part as specified in Table 1 of this subpart and all affected sources must submit compliance reports every six months as specified in §63.1980(a) and (b), including information on all deviations that occurred during the six-month reporting period. Deviations for continuous emission monitors or numerical continuous parameter monitors must be determined using a three hour monitoring block average. [§63.1955(c)]

**General and Continuing Compliance Requirements:**

1. Compliance is determined in the same way it is determined for 40 CFR Part 60, Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d) of Subpart WWW, are used to demonstrate compliance with the operating conditions for control systems. If a deviation occurs, you have failed to meet the control device operating conditions described in this subpart and have deviated from the requirements of this subpart. Finally, you must develop a written SSM plan according to the provisions in 40 CFR 63.6(e)(3). A copy of the SSM plan must be maintained on site. Failure to write or maintain a copy of the SSM plan is a deviation from the requirements of this subpart. [§63.1960]

2. A deviation is defined in §63.1990. For the purposes of the landfill monitoring and SSM plan requirements, deviations include the items in Paragraphs (a) through (c) of this section. [§63.1965]
  - (a) A deviation occurs when the control device operating parameter boundaries described in 40 CFR 60.758(c)(1) of Subpart WWW are exceeded. [§63.1965(a)]
  - (b) A deviation occurs when 1 hour or more of the hours during the three-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour. [§63.1965(b)]
  - (c) A deviation occurs when a SSM plan is not developed or maintained on site. [§63.1965(c)]
3. The three-hour block average used to demonstrate compliance are calculated in the same way as they are calculated in 40 CFR Part 60, Subpart WWW, except that the data collected during the events listed in Paragraphs (a), (b), (c), and (d) of this section are not to be included in any average computed under this subpart: [§63.1975]
  - (a) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments. [§63.1975(a)]
  - (b) Startups. [§63.1975(b)]
  - (c) Shutdowns. [§63.1975(c)]
  - (d) Malfunctions. [§63.1975(d)]

**Notifications, Records, and Reports:**

1. Keep records and reports as specified in 40 CFR Part 60, Subpart WWW, or in the Federal plan, EPA approved State plan or tribal plan that implements 40 CFR Part 60, Subpart Cc, whichever applies to your landfill, with one exception: You must submit the annual report described in 40 CFR 60.757(f) every 6 months. [§63.1980(a)]
2. You must also keep records and reports as specified in the general provisions of 40 CFR Part 60 and this part as shown in Table 1 (see Attachment B) of this subpart. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports. [§63.1980(b)]
3. If you add any liquids other than leachate in a controlled fashion to the waste mass and do not comply with the bioreactor requirements in §§63.1947, 63.1955(c) and 63.1980(c) through (f) of this subpart, you must keep a record of calculations showing that the percent moisture by weight expected in the waste mass to which liquid is added is less than 40 percent. The calculation must consider the waste mass, moisture content of the incoming waste, mass of water added to the waste including leachate recirculation and other liquids addition and precipitation, and the mass of water removed through leachate or other water losses. Moisture level sampling or mass balances calculations can be used. You must document the calculations and the basis of any assumptions. Keep the record of the calculations until you cease liquids addition. [§63.1980(g)]

## IV. Core Permit Requirements

The installation shall comply with each of the following regulations or codes. Consult the appropriate sections in the Code of Federal Regulations (CFR), the Code of State Regulations (CSR), and local ordinances for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued. The following is only an excerpt from the regulation or code, and is provided for summary purposes only.

### **10 CSR 10-6.045 Open Burning Requirements**

- 1) General Provisions. The open burning of tires, petroleum-based products, asbestos containing materials, and trade waste is prohibited, except as allowed below. Nothing in this rule may be construed as to allow open burning which causes or constitutes a public health hazard, nuisance, a hazard to vehicular or air traffic, nor which violates any other rule or statute.
- 2) Refer to the regulation for a complete list of allowances. The following is a listing of exceptions to the allowances:
  - a) Burning of household or domestic refuse. Burning of household or domestic refuse is limited to open burning on a residential premises having not more than four dwelling units, provided that the refuse originates on the same premises, with the following exceptions:
    - i) Kansas City metropolitan area. The open burning of household refuse must take place in an area zoned for agricultural purposes and outside that portion of the metropolitan area surrounded by the corporate limits of Kansas City and every contiguous municipality;
    - ii) Springfield-Greene County area. The open burning of household refuse must take place outside the corporate limits of Springfield and only within areas zoned A-1, Agricultural District;
    - iii) St. Joseph area. The open burning of household refuse must take place within an area zoned for agricultural purposes and outside that portion of the metropolitan area surrounded by the corporate limits of St. Joseph; and
    - iv) St. Louis metropolitan area. The open burning of household refuse is prohibited;
  - b) Yard waste, with the following exceptions:
    - i) Kansas City metropolitan area. The open burning of trees, tree leaves, brush or any other type of vegetation shall require an open burning permit;
    - ii) Springfield-Greene County area. The City of Springfield requires an open burning permit for the open burning of trees, brush or any other type of vegetation. The City of Springfield prohibits the open burning of tree leaves;
    - iii) St. Joseph area. Within the corporate limits of St. Joseph, the open burning of trees, tree leaves, brush or any other type of vegetation grown on a residential property is allowed during the following calendar periods and time-of-day restrictions:
      - (1) A three (3)-week period within the period commencing the first day of March through April 30 and continuing for twenty-one (21) consecutive calendar days;
      - (2) A three (3)-week period within the period commencing the first day of October through November 30 and continuing for twenty-one (21) consecutive calendar days;
      - (3) The burning shall take place only between the daytime hours of 10:00 a.m. and 3:30 p.m.; and
      - (4) In each instance, the twenty-one (21)-day burning period shall be determined by the director of Public Health and Welfare of the City of St. Joseph for the region in which the City of St. Joseph is located provided, however, the burning period first shall receive the approval of the department director; and



- iv) St. Louis metropolitan area. The open burning of trees, tree leaves, brush or any other type of vegetation is limited to the period beginning September 16 and ending April 14 of each calendar year and limited to a total base area not to exceed sixteen (16) square feet. Any open burning shall be conducted only between the hours of 10:00 a.m. and 4:00 p.m. and is limited to areas outside of incorporated municipalities;
- 3) Certain types of materials may be open burned provided an open burning permit is obtained from the director. The permit will specify the conditions and provisions of all open burning. The permit may be revoked if the owner or operator fails to comply with the conditions or any provisions of the permit.
- 4) Rumble I and II Recycling and Disposal Facility may be issued an annually renewable open burning permit for open burning provided that an air curtain destructor or incinerator is utilized and only tree trunks, tree limbs, vegetation or untreated wood waste are burned. Open burning shall occur at least two hundred (200) yards from the nearest occupied structure unless the owner or operator of the occupied structure provides a written waiver of this requirement. Any waiver shall accompany the open burning permit application. The permit may be revoked if Rumble I and II Recycling and Disposal Facility fails to comply with the provisions or any condition of the open burning permit.
- a) In a nonattainment area, as defined in 10 CSR 10-6.020, Paragraph (2)(N)5., the director shall not issue a permit under this section unless the owner or operator can demonstrate to the satisfaction of the director that the emissions from the open burning of the specified material would be less than the emissions from any other waste management or disposal method.
- 5) Reporting and Recordkeeping. New Source Performance Standard (NSPS) 40 CFR Part 60 Subpart CCCC establishes certain requirements for air curtain destructors or incinerators that burn wood trade waste. These requirements are established in 40 CFR 60.2245-60.2260. The provisions of 40 CFR Part 60 Subpart CCCC promulgated as of September 22, 2005, shall apply and are hereby incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401. To comply with NSPS 40 CFR 60.2245-60.2260, sources must conduct an annual Method 9 test. A copy of the annual Method 9 test results shall be submitted to the director.
- 6) Test Methods. The visible emissions from air pollution sources shall be evaluated as specified by 40 CFR Part 60, Appendix A–Test Methods, Method 9–Visual Determination of the Opacity of Emissions from Stationary Sources. The provisions of 40 CFR Part 60, Appendix A, Method 9 promulgated as of December 23, 1971, is incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401.

<b>10 CSR 10-6.050 Start-up, Shutdown and Malfunction Conditions</b>
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- 1) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the director within two business days, in writing, the following information:
- a) Name and location of installation;
- b) Name and telephone number of person responsible for the installation;
- c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
- d) Identity of the equipment causing the excess emissions;
- e) Time and duration of the period of excess emissions;
- f) Cause of the excess emissions;
- g) Air pollutants involved;
- h) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;

- i) Measures taken to mitigate the extent and duration of the excess emissions; and
  - j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
- 2) The permittee shall submit the Paragraph 1 information list to the director in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.
  - 3) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under Section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the Paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under Section 643.080 or 643.151, RSMo.
  - 4) Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under Sections 643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
  - 5) Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

#### **10 CSR 10-6.060 Construction Permits Required**

The permittee shall not commence construction, modification, or major modification of any installation subject to this rule, begin operation after that construction, modification, or major modification, or begin operation of any installation which has been shut down longer than five years without first obtaining a permit from the permitting authority.

#### **10 CSR 10-6.065 Operating Permits**

The permittee shall file a complete application for renewal of this operating permit at least six months before the date of permit expiration. In no event shall this time be greater than eighteen months. [10 CSR 10-6.065(6)(B)1.A(V)] The permittee shall retain the most current operating permit issued to this installation on-site. [10 CSR 10-6.065(6)(C)1.C(II)] The permittee shall immediately make such permit available to any Missouri Department of Natural Resources personnel upon request. [10 CSR 10-6.065(6)(C)3.B]

#### **10 CSR 10-6.110 Submission of Emission Data, Emission Fees and Process Information**

- 1) The permittee shall submit full emissions report either electronically via MoEIS, which requires Form 1.0 signed by an authorized company representative, or on Emission Inventory Questionnaire (EIQ) paper forms on the frequency specified in this rule and in accordance with the requirements outlined in this rule. Alternate methods of reporting the emissions, such as spreadsheet file, can be submitted for approval by the director.
- 2) The permittee may be required by the director to file additional reports.

- 3) Public Availability of Emission Data and Process Information. Any information obtained pursuant to the rule(s) of the Missouri Air Conservation Commission that would not be entitled to confidential treatment under 10 CSR 10-6.210 shall be made available to any member of the public upon request.
- 4) The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079.
- 5) The fees shall be payable to the Department of Natural Resources and shall be accompanied by the emissions report.
- 6) The permittee shall complete required reports on state supplied EIQ forms or electronically via MoEIS. Alternate methods of reporting the emissions can be submitted for approval by the director. The reports shall be submitted to the director by April 1 after the end of each reporting year. If the full emissions report is filed electronically via MoEIS, this due date is extended to May 1.
- 7) The reporting period shall end on December 31 of each calendar year. Each report shall contain the required information for each emission unit for the twelve (12)-month period immediately preceding the end of the reporting period.
- 8) The permittee shall collect, record and maintain the information necessary to complete the required forms during each year of operation of the installation.

#### **10 CSR 10-6.130 Controlling Emissions During Episodes of High Air Pollution Potential**

This rule specifies the conditions that establish an air pollution alert (yellow/orange/red/purple), or emergency (maroon) and the associated procedures and emission reduction objectives for dealing with each. The permittee shall submit an appropriate emergency plan if required by the Director.

#### **10 CSR 10-6.150 Circumvention**

The permittee shall not cause or permit the installation or use of any device or any other means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.

#### **10 CSR 10-6.170**

##### **Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin**

###### **Emission Limitation:**

- 1) The permittee shall not cause or allow to occur any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line of origin. The nature or origin of the particulate matter shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director.
- 2) The permittee shall not cause nor allow to occur any fugitive particulate matter emissions to remain visible in the ambient air beyond the property line of origin.
- 3) Should it be determined that noncompliance has occurred, the director may require reasonable control measures as may be necessary. These measures may include, but are not limited to, the following:
  - a) Revision of procedures involving construction, repair, cleaning and demolition of buildings and their appurtenances that produce particulate matter emissions;
  - b) Paving or frequent cleaning of roads, driveways and parking lots;
  - c) Application of dust-free surfaces;

- d) Application of water; and
- e) Planting and maintenance of vegetative ground cover.

**Monitoring:**

The permittee shall conduct inspections of its facilities sufficient to determine compliance with this regulation. If the permittee discovers a violation, the permittee shall undertake corrective action to eliminate the violation.

The permittee shall maintain the following monitoring schedule:

- 1) The permittee shall conduct weekly observations for a minimum of eight (8) consecutive weeks after permit issuance.
- 2) Should no violation of this regulation be observed during this period then-
  - a) The permittee may observe once every two (2) weeks for a period of eight (8) weeks.
  - b) If a violation is noted, monitoring reverts to weekly.
- c) Should no violation of this regulation be observed during this period then-
  - i) The permittee may observe once per month.
  - ii) If a violation is noted, monitoring reverts to weekly.
- 3) If the permittee reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner to the initial monitoring frequency.

**Recordkeeping:**

The permittee shall document all readings on Attachment A, or its equivalent, noting the following:

- 1) Whether air emissions (except water vapor) remain visible in the ambient air beyond the property line of origin.
- 2) Whether the visible emissions were normal for the installation.
- 3) Whether equipment malfunctions contributed to an exceedance.
- 4) Any violations and any corrective actions undertaken to correct the violation.

**10 CSR 10-6.180 Measurement of Emissions of Air Contaminants**

- 1) The director may require any person responsible for the source of emission of air contaminants to make or have made tests to determine the quantity or nature, or both, of emission of air contaminants from the source. The director may specify testing methods to be used in accordance with good professional practice. The director may observe the testing. All tests shall be performed by qualified personnel.
- 2) The director may conduct tests of emissions of air contaminants from any source. Upon request of the director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.
- 3) The director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

**10 CSR 10-6.165 Restriction of Emission of Odors**

**This requirement is not federally enforceable.**

No person may cause, permit or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one volume of odorous air is diluted with seven volumes of odor-free air for two separate trials not less than 15 minutes apart within the period of one hour. This odor evaluation shall be taken at a location outside of the installation's property boundary.

**Title VI – 40 CFR Part 82 Protection of Stratospheric Ozone**

- 1) The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
  - a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
  - b) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
  - c) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
  - d) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
- 2) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:
  - a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
  - b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
  - c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
  - d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with recordkeeping requirements pursuant to §82.166. ("MVAC-like" appliance as defined at §82.152).
  - e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
  - f) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- 3) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.
- 4) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.
- 5) The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR Part 82*

**10 CSR 10-6.280 Compliance Monitoring Usage**

- 1) The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:

- a) Monitoring methods outlined in 40 CFR Part 64;
  - b) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
  - c) Any other monitoring methods approved by the director.
- 2) Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred by a permittee:
- a) Monitoring methods outlined in 40 CFR Part 64;
  - b) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
  - c) Compliance test methods specified in the rule cited as the authority for the emission limitations.
- 3) The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
- a) Applicable monitoring or testing methods, cited in:
    - i) 10 CSR 10-6.030, "Sampling Methods for Air Pollution Sources";
    - ii) 10 CSR 10-6.040, "Reference Methods";
    - iii) 10 CSR 10-6.070, "New Source Performance Standards";
    - iv) 10 CSR 10-6.080, "Emission Standards for Hazardous Air Pollutants"; or
  - b) Other testing, monitoring, or information gathering methods, if approved by the director, that produce information comparable to that produced by any method listed above.

## V. General Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued,

### **10 CSR 10-6.065(6)(C)1.B Permit Duration**

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed.

### **10 CSR 10-6.065(6)(C)1.C General Recordkeeping and Reporting Requirements**

- 1) Recordkeeping
  - a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
  - b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any Missouri Department of Natural Resources' personnel upon request.
- 2) Reporting
  - a) All reports shall be submitted to the Air Pollution Control Program's Enforcement Section, P. O. Box 176, Jefferson City, MO 65102.
  - b) The permittee shall submit a report of all required monitoring by:
    - i) October 1st for monitoring which covers the January through June time period, and
    - ii) April 1st for monitoring which covers the July through December time period.
    - iii) Exception. Monitoring requirements which require reporting more frequently than semi-annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
  - c) Each report shall identify any deviations from emission limitations, monitoring, recordkeeping, reporting, or any other requirements of the permit, this includes deviations or Part 64 exceedances.
  - d) Submit supplemental reports as required or as needed. Supplemental reports are required no later than ten days after any exceedance of any applicable rule, regulation or other restriction. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
    - i) Notice of any deviation resulting from an emergency (or upset) condition as defined in Paragraph (6)(C)7.A of 10 CSR 10-6.065 (Emergency Provisions) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.

- ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.
- iii) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's semi-annual report shall be reported on the schedule specified in this permit, and no later than ten days after any exceedance of any applicable rule, regulation, or other restriction.
- e) Every report submitted shall be certified by the responsible official, except that, if a report of a deviation must be submitted within ten days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within ten days after that, together with any corrected or supplemental information required concerning the deviation.
- f) The permittee may request confidential treatment of information submitted in any report of deviation.

#### **10 CSR 10-6.065(6)(C)1.D Risk Management Plan Under Section 112(r)**

The permittee shall comply with the requirements of 40 CFR Part 68, Accidental Release Prevention Requirements. If the permittee has more than a threshold quantity of a regulated substance in process, as determined by 40 CFR Section 68.115, the permittee shall submit a Risk Management Plan in accordance with 40 CFR Part 68 no later than the latest of the following dates:

- 1) June 21, 1999;
- 2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or
- 3) The date on which a regulated substance is first present above a threshold quantity in a process.

#### **10 CSR 10-6.065(6)(C)1.F Severability Clause**

In the event of a successful challenge to any part of this permit, all uncontested permit conditions shall continue to be in force. All terms and conditions of this permit remain in effect pending any administrative or judicial challenge to any portion of the permit. If any provision of this permit is invalidated, the permittee shall comply with all other provisions of the permit.

#### **10 CSR 10-6.065(6)(C)1.G General Requirements**

- 1) The permittee must comply with all of the terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application.
- 2) The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit
- 3) The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- 4) This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
- 5) The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to



the Air Pollution Control Program copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 10 CSR 10-6.065(6)(C)1.

#### **10 CSR 10-6.065(6)(C)1.H Incentive Programs Not Requiring Permit Revisions**

No permit revision will be required for any installation changes made under any approved economic incentive, marketable permit, emissions trading, or other similar programs or processes provided for in this permit.

#### **10 CSR 10-6.065(6)(C)1.I Reasonably Anticipated Operating Scenarios**

None

#### **10 CSR 10-6.065(6)(C)3 Compliance Requirements**

- 1) Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
- 2) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
  - a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
  - b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
  - d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
- 3) All progress reports required under an applicable schedule of compliance shall be submitted semi-annually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
  - a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
  - b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
- 4) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, as well as the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and Part 64 exceedances and excursions must be included in the compliance certifications. The compliance certification shall include the following:
  - a) The identification of each term or condition of the permit that is the basis of the certification;
  - b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;

- c) Whether compliance was continuous or intermittent;
- d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and
- e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

#### **10 CSR 10-6.065(6)(C)6 Permit Shield**

- 1) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date that this permit is issued, provided that:
  - a) The applicable requirements are included and specifically identified in this permit, or
  - b) The permitting authority, in acting on the permit revision or permit application, determines in writing that other requirements, as specifically identified in the permit, are not applicable to the installation, and this permit expressly includes that determination or a concise summary of it.
- 2) Be aware that there are exceptions to this permit protection. The permit shield does not affect the following:
  - a) The provisions of Section 303 of the Act or Section 643.090, RSMo concerning emergency orders,
  - b) Liability for any violation of an applicable requirement which occurred prior to, or was existing at, the time of permit issuance,
  - c) The applicable requirements of the acid rain program,
  - d) The authority of the Environmental Protection Agency and the Air Pollution Control Program of the Missouri Department of Natural Resources to obtain information, or
  - e) Any other permit or extra-permit provisions, terms or conditions expressly excluded from the permit shield provisions.

#### **10 CSR 10-6.065(6)(C)7 Emergency Provisions**

- 1) An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7.A shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:
  - a) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
  - b) That the installation was being operated properly,
  - c) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
  - d) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
- 2) Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

#### **10 CSR 10-6.065(6)(C)8 Operational Flexibility**

An installation that has been issued a Part 70 operating permit is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described below if the changes are not Title I modifications, the changes do not cause emissions to exceed emissions allowable

under the permit, and the changes do not result in the emission of any air contaminant not previously emitted. The permittee shall notify the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, at least seven days in advance of these changes, except as allowed for emergency or upset conditions. Emissions allowable under the permit means a federally enforceable permit term or condition determined at issuance to be required by an applicable requirement that establishes an emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.

- 1) Section 502(b)(10) changes. Changes that, under Section 502(b)(10) of the Act, contravene an express permit term may be made without a permit revision, except for changes that would violate applicable requirements of the Act or contravene federally enforceable monitoring (including test methods), recordkeeping, reporting or compliance requirements of the permit.
  - a) Before making a change under this provision, The permittee shall provide advance written notice to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, describing the changes to be made, the date on which the change will occur, and any changes in emission and any permit terms and conditions that are affected. The permittee shall maintain a copy of the notice with the permit, and the Air Pollution Control Program shall place a copy with the permit in the public file. Written notice shall be provided to the EPA and the Air Pollution Control Program as above at least seven days before the change is to be made. If less than seven days' notice is provided because of a need to respond more quickly to these unanticipated conditions, the permittee shall provide notice to the EPA and the Air Pollution Control Program as soon as possible after learning of the need to make the change.
  - b) The permit shield shall not apply to these changes.

<b>10 CSR 10-6.065(6)(C)9 Off-Permit Changes</b>
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- 1) Except as noted below, the permittee may make any change in its permitted operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Insignificant activities listed in the application, but not otherwise addressed in or prohibited by this permit, shall not be considered to be constrained by this permit for purposes of the off-permit provisions of this section. Off-permit changes shall be subject to the following requirements and restrictions:
  - a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is subject to any requirements under Title IV of the Act or is a Title I modification;
  - b) The permittee must provide written notice of the change to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, no later than the next annual emissions report. This notice shall not be required for changes that are insignificant activities under 10 CSR 10-6.065(6)(B)3. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change.
  - c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes; and
  - d) The permit shield shall not apply to these changes.

**10 CSR 10-6.020(2)(R)12 Responsible Official**

The application utilized in the preparation of this permit was signed by Brian L. Allen, Project Manager. If this person terminates employment, or is reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

**10 CSR 10-6.065(6)(E)6 Reopening-Permit for Cause**

This permit may be reopened for cause if:

- 1) The Missouri Department of Natural Resources (MDNR) receives notice from the Environmental Protection Agency (EPA) that a petition for disapproval of a permit pursuant to 40 CFR § 70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,
- 2) The Missouri Department of Natural Resources or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
- 3) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
  - a) The permit has a remaining term of less than three years;
  - b) The effective date of the requirement is later than the date on which the permit is due to expire;or
  - c) The additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
- 4) The installation is an affected source under the acid rain program and additional requirements (including excess emissions requirements), become applicable to that source, provided that, upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit; or
- 5) The Missouri Department of Natural Resources or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

**10 CSR 10-6.065(6)(E)1.C Statement of Basis**

This permit is accompanied by a statement setting forth the legal and factual basis for the permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

## VI. Attachments

Attachments follow.



**Attachment B**

**Table 1 to Subpart AAAA of Part 63—Applicability of NESHAP General Provisions to Subpart AAAA**

Part 63 Citation	Description	Explanation
63.1(a)	Applicability: general applicability of NESHAP in this part	Affected sources are already subject to the provisions of paragraphs (a)(10)–(12) through the same provisions under 40 CFR, part 60 Subpart A.
63.1(b)	Applicability determination for stationary sources	
63.1(e)	Title V permitting	
63.2	Definitions	
63.4	Prohibited activities and circumvention	Affected sources are already subject to the provisions of paragraph (b) through the same provisions under 40 CFR, part 60 Subpart A.
63.5(b)	Requirements for existing, newly constructed, and reconstructed Sources	
63.6(e)	Operation and maintenance requirements, startup, shutdown and malfunction plan provisions	
63.6(f)	Compliance with non-opacity emission standards	Affected sources are already subject to the provisions of paragraphs (f)(1) and (2)(i) through the same provisions under 40 CFR, part 60 Subpart A.
63.10(b) (2)(i)–(b) (2)(v)	General recordkeeping requirements	
63.10(d)(5)	If actions taken during a startup, shutdown and malfunction plan are consistent with the procedures in the startup, shutdown and malfunction plan, this information shall be included in a semi-annual startup, shutdown and malfunction plan report. Any time an action taken during a startup, shutdown and malfunction plan is not consistent with the startup, shutdown and malfunction plan, the source shall report actions taken within 2 working days after commencing such actions, followed by a letter 7 days after the event	
63.12(a)	These provisions do not preclude the State from adopting and enforcing any standard, limitation, etc., requiring permits, or requiring emissions reductions in excess of those specified	
63.15	Availability of information and confidentiality	

## STATEMENT OF BASIS

### Permit Reference Documents

These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

- 1) Part 70 Operating Permit Application, received December 22, 2011;
- 2) 2010 Emissions Inventory Questionnaire, received February 22, 2011;
- 3) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition;
- 4) webFIRE; and
- 5) Construction Permit # 1298-011;
- 6) No Construction Permit required determination, PAMS # 1999-12-068;
- 7) No Construction Permit required determination, PAMS # 2004-03-009;
- 8) No Construction Permit required determination, PAMS # 2005-08-003; and
- 9) No Construction Permit required determination, PAMS # 2006-08-030.

### Applicable Requirements Included in the Operating Permit but Not in the Application or Previous Operating Permits

In the operating permit application, the installation indicated they were not subject to the following regulation(s). However, in the review of the application, the agency has determined that the installation is subject to the following regulation(s) for the reasons stated.

10 CSR 10-6.405, Restriction of Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating

This rule was promulgated in 2011 and did not exist when the application was submitted. The applicability of this rule is detailed in "Other Regulatory Requirements" below.

### Other Air Regulations Determined Not to Apply to the Operating Permit

The Air Pollution Control Program (APCP) has determined the following requirements to not be applicable to this installation at this time for the reasons stated.

10 CSR 10-2.040, Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment used for Indirect Heating

This rule was rescinded on October 30, 2011 and replaced by 10 CSR 10-6.405.

### Construction Permit History

The following construction permits were issued to this installation:

- 1) Construction Permit # 1298-011  
This permit was issued November 3, 1998, to authorize installation of a landfill gas collection system to be vented to an existing enclosed flare in accordance with Solid Waste Operating Permit No. 109519. This permit does not contain any special conditions.
- 2) No Construction Permit required determination, PAMS # 1999-12-068  
This determination is for installation of the 1.1 MMBtu/hr landfill gas fired boiler. The potential emissions were less than the permitting threshold, therefore no Construction Permit was required.
- 3) No Construction Permit required determination, PAMS # 2004-03-009

The determination is for installation of a 0.75 MMBtu/hr landfill gas fired boiler. The potential emissions were less than the permitting threshold, therefore no Construction Permit was required. According to current records, it appears this boiler was never installed.

4) No Construction Permit required determination, PAMS # 2005-08-003

This determination is for installation of a pipeline and compression station from the Landfill to the LaFarge-North America Cement Plant located on the opposite side of Courtney Road for the purpose of providing landfill gas as a supplemental fuel for the Lafarge operations. No construction permit was required for this project.

5) No Construction Permit required determination, PAMS #2006-08-030

This determination is for replacement of the 1200 SCFM enclosed Callidus flare with at 1620 SCFM candlestick flare. The potential emissions were less than the permitting threshold, therefore no Construction Permit was required.

### **New Source Performance Standards (NSPS) Applicability**

#### **40 CFR Part 60 Subpart Cc-Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills**

This regulation applies to each existing MSW landfill for which construction, reconstruction or modification was commenced before May 30, 1991.

This landfill was constructed after May 30, 1991, therefore this rule does not apply.

#### **40 CFR Part 60 Subpart Kb-Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984**

This rule applies to each storage vessel with a capacity greater than or equal to 75 cubic meters ( $m^3$ ) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

The storage tanks at this installation are all less than 75  $m^3$  (19,812.9 gallon) capacity, therefore this rule does not apply.

#### **40 CFR Part 60 Subpart WWW -Standards of Performance for Municipal Solid Waste Landfills**

The provisions of this subpart apply to each municipal solid waste landfill that commenced construction, reconstruction or modification on or after May 30, 1991. This regulation applies and appears in the Operating Permit as Permit Condition (Emission Units EP-01, EP-08, EP-09, and EP-10)-001.

### **Maximum Achievable Control Technology (MACT) Applicability**

#### **40 CFR Part 63 Subpart AAAA-National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills**

This subpart requires all landfills described in §63.1935 to meet the requirements of 40 CFR Part 60, Subpart Cc or WWW and requires timely control of bioreactors. This subpart also requires such landfills to meet the startup, shutdown, and malfunction (SSM) requirements of the general provisions of this part and provides that compliance with the operating conditions shall be demonstrated by parameter monitoring results that are within the specified ranges. It also includes additional reporting requirements. This regulation applies and appears in the Operating Permit as Permit Condition (Emission Units EP-01, EP-08, EP-09, and EP-10)-002.



40 CFR Part 63 Subpart JJJJJ—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

This regulation does not apply to gas-fired boilers (which includes landfill gas), see §63.11195(e). Since the boiler only burns LFG, this regulation does not apply.

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

40 CFR Part 61, Subpart M, National Emission Standards for Asbestos

This regulation has sections that apply to active waste disposal sites that receive asbestos containing materials. Initially this regulation had been included in this Operating permit, since the installation had accepted asbestos containing materials. However, upon further review, this regulation has been removed from this Operating permit because this regulation applies to active waste disposal sites, and this installation is not an active waste disposal site.

**Compliance Assurance Monitoring (CAM) Applicability**

The landfill and flares are regulated under standards proposed after November 15, 1990 pursuant to Section 111 or 112 of the Act, and are therefore exempt from CAM per §64.2(b)(1)(i).

The other emission units do not use control devices to comply with emissions limitations, and are therefore not subject to CAM.

**Greenhouse Gas Emissions**

This installation is not a major source for greenhouse gases, as shown in the table below. This table shows the potential emissions of the flare and boiler only and does not include fugitive emissions from the landfills.

**Updated Potential to Emit for the Installation**

Pollutant	Potential to Emit (tons/yr) <sup>1</sup>
CO	319.36
CO <sub>2</sub> e	0
HAP	0
NO <sub>x</sub>	17.35
PM <sub>10</sub>	7.32
PM <sub>2.5</sub>	7.32
SO <sub>x</sub>	0
VOC	0

<sup>1</sup>The flare and boiler were evaluated at 8,760 hours of uncontrolled annual operation, using emission factors from webFIRE, SCC 50100410 and SCC 50100423. This table does not include any fugitive emissions from the landfills, which do have VOC and HAP emissions. Since this installation is not a named source, the fugitive emissions are not included in potential emission calculations.

**Other Regulatory Determinations**

10 CSR 10-6.405, Restriction of Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating

The boiler is subject to this rule. As a new indirect heating source (installed after February 15, 1979), with a plant wide heat input less than 10 MMBtu/hr, the emission limit is 0.4 lbs/MMBtu (0.44 lb/hr). The MHDR of the unit is 1.1 MMBtu/hr, and the heating value of landfill gas is 500 MMBtu/MMCF, the following calculation demonstrates compliance:

$$1.1 \frac{MMBtu}{hr} \times 8.2 \frac{lb PM_{10}}{MMCF} \times \frac{1 MMCF}{500 MMBTU} = 0.02 \frac{lb PM_{10}}{hr}$$

Since the potential emissions are less than the limit, this unit is assumed to always be in compliance, therefore rule was not included in this Operating Permit. Additionally, the installation meets the exemption listed in 6.405(1)(E), as all of the installation's applicable units are fueled only by landfill gas.

#### 10 CSR 10-6.310, Restriction of Emissions from Municipal Solid Waste Landfills

This regulation applies to landfills which were constructed/reconstructed/or modified before May 30, 1991. This landfill was constructed after that date, and is subject to the New Source Performance Standards instead of this rule.

#### 10 CSR 10-6.260, Restriction of Emission of Sulfur Compounds

The boiler and flare are subject to this rule. These units burn landfill gas, having a sulfur concentration of 46.9 ppmv, which is much less than the limit for new sources, 500 ppmv. Since these units are assumed to always be in compliance, this rule was not included in the Operating Permit.

#### 10 CSR 10-6.220, Restriction of Emission of Visible Air Contaminants

The flare and boiler are subject to NSPS and MACT standards for opacity, and are therefore exempt from this rule per 6.220(1)(H).

#### **Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis**

Any regulation which is not specifically listed in either the Operating Permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons:

- 1) The specific pollutant regulated by that rule is not emitted by the installation;
- 2) The installation is not in the source category regulated by that rule;
- 3) The installation is not in the county or specific area that is regulated under the authority of that rule;
- 4) The installation does not contain the type of emission unit which is regulated by that rule;
- 5) The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the Air Pollution Control Program's satisfaction, the installation's compliance with that regulation(s). If the installation is not in compliance with a regulation which was not previously cited, the installation shall submit to the Air Pollution Control Program a schedule for achieving compliance for that regulation(s).

Prepared by:

---

Nicole Weidenbenner, P.E.  
Environmental Engineer

Mr. Brian L. Allen  
Rumble I and II Recycling and Disposal Facility  
720 East Butterfield Road  
Lombard, IL 60148

Re: Rumble I and II Recycling and Disposal Facility, 095-0273  
Permit Number: **OP2013-014**

Dear Mr. Allen:

Enclosed with this letter is your Part 70 operating permit. Please review this document carefully. Operation of your installation in accordance with the rules and regulations cited in this document is necessary for continued compliance. It is very important that you read and understand the requirements contained in your permit.

You may appeal this permit to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.078.16 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you have any questions or need additional information regarding this permit, please do not hesitate to contact Nicole Weidenbenner, P.E. at the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Michael J. Stansfield, P.E.  
Operating Permit Unit Chief

MJS:nwk

Enclosures

c: Kansas City Regional Office  
PAMS File: 2011-12-057

**MEMORANDUM**

DATE: November 30, 2012

TO: 2011-12-057 Rumble I and II Recycling and Disposal Facility

FROM: Nicole Weidenbenner, P.E., Environmental Engineer

SUBJECT: Response to Public Comments

The draft Part 70 Operating Permit for Rumble I and II Recycling and Disposal Facility (095-0273) was placed on public notice as of April 16, 2012, for a 30-day comment period. The public notice was published on the Department of Natural Resources' Air Pollution Control Program's web page at: <http://www.dnr.mo.gov/env/apcp/PermitPublicNotices.htm> on Monday, April 16, 2012.

On May 8, 2012, the Air Pollution Control Program received comments from EPA Region 7's Mark A. Smith, Air Permitting and Compliance Branch Chief, the comments will be addressed within this Response to EPA Comments document.

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**EPA Comment #1:**

Comment 1. – Permit Condition (Emission units EP-01, EP-08, EP-09 and EP-10)-001:

10 CSR 10-6.065(6)(C)(1).(A.) (I), of the Air Pollution Control Regulations for the State of Missouri, requires Part 70 Operating Permits to specify emission limitations or standards applicable to the installation and include those operational requirements or limitations as necessary to assure compliance with all applicable requirements. Subparagraph (I) requires the permit specify and reference the origin of and authority for each term or condition and identify any differences in form as compared to the applicable requirement upon which the term or condition is based. Additionally, Section III, Emission Unit Specific Emission Limitations, in the draft operating permit says:

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable regulations. All citations, unless otherwise noted, are regulations in effect as of the date that this permit is issued.

The practice of MDNR has been to provide a brief and/or paraphrased description of the applicable standard with the reference to the CFR and/or CSR. This streamlined approach appears to follow the March 5, 1996 EPA guidance memorandum "White Paper Number 2 for Improved Implementation of The Part 70 Operating Permits Program". However, Permit Condition (Emission units EP-01, EP-08, EP-09 and EP-10)-001, included in this draft Rumble I and II Recycling and Disposal Facility Part 70 operating permit, appears to include the complete text of the standard from the Code of Federal Regulations, verbatim, along with the CFR citation.

EPA Region 7 suggests this permit condition be modified to only specify emission limitations or applicable standards appropriate for the Rumble I and II Recycling and Disposal Facility and provide the CFR citation. Additionally, if MDNR is going to continue to include tables within permits extracted from the CFR, these tables should be included as attachments to the permit.

### **Missouri Air Pollution Control Program Response to EPA Comment #1:**

The entire applicable CFR language is included as a matter of procedure that was developed with EPA during the inception of Missouri's Operating Permit Program. To make the changes that are currently suggested by EPA will require a program-wide change in procedure. While MDNR is not opposed to changing our procedures, any changes will be made in future permits and will not apply to permits that have already completed the public notice phase.

This permit condition contains 40 CFR Part 60 Subpart WWW -Standards of Performance for Municipal Solid Waste Landfills. The current version of this regulation does not contain any tables.

### **EPA Comment #2:**

Comment 2. -- Permit Condition (Emission units EP-01, EP-08, EP-09 and EP-10)-002:

10 CSR 10-6.065(6)(C)(1).(A.)(I), of the Air Pollution Control Regulations for the State of Missouri, requires Part 70 Operating Permits to specify emission limitations or standards applicable to the installation and include those operational requirements or limitations as necessary to assure compliance with all applicable requirements. Subparagraph (I) requires the permit specify and reference the origin of and authority for each term or condition and identify any differences in form as compared to the applicable requirement upon which the term or condition is based. Additionally, Section III, Emission Unit Specific Emission Limitations, in the draft operating permit says:

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable regulations. All citations, unless otherwise noted, are regulations in effect as of the date that his permit is issued.

The practice of MDNR has been to provide a brief and/or paraphrased description of the applicable standard with the reference to the CFR and/or CSR. This streamlined approach appears to follow the March 5, 1996 EPA guidance memorandum "White Paper Number 2 for Improved Implementation of The Part 70 Operating Permits Program". However, Permit Condition (Emission units EP-01, EP-08, EP-09 and EP-10)-002, included in this draft Rumble I and II Recycling and Disposal Facility Part 70 operating permit, appears to include the complete text of the standard from the Code of Federal Regulations, verbatim, along with the CFR citation.

EPA Region 7 suggests this permit condition be modified to only specify emission limitations or applicable standards appropriate for the Rumble I and II Recycling and Disposal Facility and provide the CFR citation. Additionally, if MDNR is going to continue to include tables within permits extracted from the CFR, these tables should be included as attachments to the permit.

### **Missouri Air Pollution Control Program Response to EPA Comment #2:**

The entire applicable CFR language is included as a matter of procedure that was developed with EPA during the inception of Missouri's Operating Permit Program. To make the changes that are currently suggested by EPA will require a program-wide change in procedure. While MDNR is not opposed to changing our procedures, any changes will be made in future permits and will not apply to permits that have already completed the public notice phase.

This permit condition contains 40 CFR part 63 Subpart AAAA-National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills. The current version of this regulation contains one table, which already appears as Attachment D in the operating permit.

**EPA Comment #3:**

Comment 3. – 10 CSR 10-6.020(2)(R)12 Responsible Official:

10 CSR 10-6.020(2)(R)12 of the Air Pollution Control Regulations for the State of Missouri, defines the responsible official to include one of the following:

- A. The president, secretary, treasurer, or vice-president of a corporation in charge of a principal business function, any other person who performs similar policy and decision-making functions for the corporation, or a duly-authorized representative of this person if the representative is responsible for the overall operation of one (1) or more manufacturing, production, or operating facilities applying for or subject to a permit and either—
  - (I) The facilities employ more than two hundred fifty (250) persons or have a gross annual sales or expenditures exceeding twenty-five (25) million dollars (in second quarter 1980 dollars); or
  - (II) The delegation of authority to this representative is approved in advance by the permitting authority;
- B. A general partner in a partnership or the proprietor in a sole proprietorship;
- C. Either a principal executive officer or ranking elected official in a municipality or state, federal, or other public agency. For the purpose of this subparagraph, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency; or
- D. The designated representative of an affected source insofar as actions, standards, requirements, or prohibitions under Title IV of the Act or the regulations promulgated under the Act are concerned and the designated representative for any other purposes under part 70.

The Rumble I and II Recycling and Disposal Facility draft permit indicates the responsible official is the Project Manager. This title does not appear to meet the definition of the responsible official and there is no reference in the statement of basis to verify that this position meets the definition.

Therefore EPA suggests that Rumble I and II Recycling and Disposal Facility and MDNR provide written confirmation that the Project Manager meets the requirements of the definition of responsible official.

**Missouri Air Pollution Control Program Response to EPA Comment #3:**

According to the citation provided, a duly-authorized representative is allowed if the representative is responsible for the overall operation of at least one manufacturing, production, or operating facility, and meets the requirements detailed in (I) and (II) above. The Project Manager meets these requirements.

**EPA Comment #4:**

Comment 4. – Statement of Basis:

1.) The section titled National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability says:

40 CFR part 61, Subpart M, National Emission Standards for Asbestos  
This regulation has sections that apply to active waste disposal sites that receive asbestos containing materials. This regulation applies and appears in the Operating Permit as Permit Condition PW002.

However, section II Plant Wide Emission Limitations, page 5, in the draft Rumble I and II Recycling and Disposal Facility Part 70 operating permit says there are no plant wide emission limitations. Therefore, EPA recommends that MDNR correct this discrepancy.

2.) The section on Greenhouse Gas Emissions says: “This installation is not a major source for greenhouse gases, as shown in the table below. This table shows the potential emissions of the flare and boiler only and does not include fugitive emissions from the landfill.” However, Rumble I and II Recycling and Disposal reported to the EPA, in accordance with the requirements associated with the mandatory greenhouse gas reporting rule. Rumble I and II reported that their landfill in Sugar Creek had an estimated 2010 CO<sub>2e</sub> of 24,129 metric tonnes.

Therefore, MDNR should request Rumble I and II Recycling and Disposal supply the necessary greenhouse gas emission information that more accurately reflects actual conditions. If necessary, MDNR can use the authority of 40 CFR 70.5(a)(2) and 10 CSR 10-6.6065 (6)(B)1.B.(IV) to obtain the required emission information.

**Missouri Air Pollution Control Program Response to EPA Comment #4:**

40 CFR part 61, Subpart M has been removed from the permit, as this subpart applies to active waste collection sites and this installation is not an active waste collection site.

As stated in the statement of basis, the emissions shown in the table are from the flare and boiler only, and were calculated using emission factors from webFIRE. According to 10 CSR 10-6.065(2)(A)2., the fugitive emissions of an installation are not considered unless the installation is a named source. Since this installation is not a named source, it would not be appropriate to include the fugitive emissions in the potential emissions table.