

Louisville Metro Air Pollution Control District

850 Barret Ave., Louisville, Kentucky 40204

14 June 2013

Title V Statement of Basis

Company: Waste Management of Kentucky's Outer Loop Recycling and Disposal Facility (OLRDF)

Plant Location: 2673 Outer Loop Road, Louisville, Kentucky 40219-3547

Date Application Received: 13 April 2005

Date Admin Complete: 12 June 2005

Public Comment Date: 17 January 2013
20 April 2013

Proposed Permit Date: 17 January 2013
20 April 2013

District Engineer: Chris Gerstle

Permit No: 149-97-TV (R1)

Plant ID: 0532

SIC Code: 4953

NAICS: 562212

AFS: 00532

Introduction:

This permit will be issued pursuant to: (1) Regulation 2.16, (2) Title 40 of the Code of Federal Regulations Part 70, and (3) Title V of the Clean Air Act Amendments of 1990. Its purpose is to identify and consolidate existing District and Federal air requirements and to provide methods of determining continued compliance with these requirements.

Jefferson County is classified as an attainment area for lead (Pb), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), carbon monoxide (CO), 1 hr and 8 hr ozone (O₃), and particulate matter less than 10 microns (PM₁₀); and is a non-attainment area for particulate matter less than 2.5 microns (PM_{2.5}).

Application Type/Permit Activity:

Initial Issuance

Permit Revision

Administrative

Minor

Significant

Permit Renewal

Compliance Summary:

Compliance certification signed

Compliance schedule included

Source is out of compliance

Source is operating in compliance

I. Source Information

1. **Product Description:** Landfill gas is produced as a result of non-hazardous solid waste decomposition.
2. **Process Description:** The process includes a solid waste disposal facility having the meaning defined in 40 CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul roads, future cells within the units defined in Landfill Gas Collection and Control System Design Plan and the management of leachate) and the improvements on the land used for the disposal of solid waste in addition to other waste management practices such as solidification, bioremediation and the insignificant activity of composting. The Bioremediation of Contaminated Soil (Emission Unit U3) is not to be confused with a bioreactor, which is defined in 40 CFR 63.1990 as a MSW landfill or portion of a MSW landfill where any liquid other than leachate (leachate includes landfill gas condensate) is added in a controlled fashion into the waste mass (often in combination with recirculating leachate) to reach a minimum average moisture content of at least 40 percent by weight to accelerate or enhance the anaerobic (without oxygen) biodegradation of the waste.

The source receives municipal solid waste which is then disposed of in a landfill. Landfill gas is produced as a result of waste decomposition. Leachate from the landfill is collected and processed in the sequential batch reactor (SBR) pre-treatment facility. Contaminated material is stockpiled and aerated in a closed loop setup to allow microorganisms to degrade the organic contamination. Liquid waste goes through a solidification process before being placed in the landfill. A paint booth is used for painting disposal bins or boxes located at customer businesses.

3. **Site Determination:** There are no other facilities that are contiguous or adjacent and under common control.
4. **Emission Unit Summary:**

Emission Unit	Equipment Description
U1	Municipal Solid Waste Landfill (MSWL) with Three (3) Open Flares and Landfill Gas (LFG) Treatment System
U2	Leachate Pre-treatment (SBR)
U3	Bioremediation of Contaminated Soil
U4	Gasoline Storage Tank
U5	Liquid Solidification Process
U6	Truck Traffic
U7	Paint Booth
IA1	CNG Generator

5. **Fugitive Sources:**

Truck traffic
Landfill construction

6. Permit Revisions:

Revision No.	Issue Date	Public Comment Date	Type	Page No.	Description
N/A	10/10/2000	5/7/2000	Initial	Entire Permit	Initial Permit Issuance
R1	6/14/2013	1/17/2013	Renewal	Entire Permit	Scheduled Permit Renewal; Change of Responsible Official; Incorporation of Construction Permits: 14-03 (leachate tanks, U2) 422-08 (expansion, U1) 423-08 (two flares, U1) 212-09 (leachate tanks, U2) Update the Insignificant Activities List Incorporate 40 CFR 63 Subpart DDDDD (leachate heater, U2)
		4/20/2013	Revision	Entire Permit	Change the STAR TAC limits

7. Emission Summary:

Pollutant	Actual Emissions (tpy) 2011 Data	Pollutant that triggered Major Source Status (based on PTE)
VOC	44.53	No
CO	110.86	Yes ¹
NO _x	20.37	No
SO ₂	5.84	No
PM ₁₀	51.15	Yes
Total HAPs	19.61	Yes
Single HAP > 1 tpy	Ethyl Benzene Hydrochloric Acid, Toluene; Xylene	No
GHGs	450,369 ²	Yes

Note¹: Major for Title V, limit taken to not be major for pollutant for PSD.

Note²: Emissions are potential not actual emissions.

Applicable Requirements:

[X] PSD [X] 40 CFR 60 [X] 40 CFR 63 [X] SIP
[X] NSR [X] 40 CFR 61 [X] District-Origin [] Other

8. MACT Requirements: The source has no future MACT requirements.**9. Referenced Federal Regulations in Permit:**

40 CFR 60, Subpart WWW Standards of Performance for Municipal Solid Waste Landfills

40 CFR 61, Subpart M National Emission Standard for Asbestos

40 CFR 63, Subpart AAAA	National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills
40 CFR 60, Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
40 CFR 63, Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
40 CFR 63, Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters

II. Regulatory Analysis

1. **Acid Rain Requirements:** The source is not subject to the Acid Rain Program.
2. **Stratospheric Ozone Protection Requirements:** Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. This source does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.
3. **Prevention of Accidental Releases 112(r):** The source does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, *Chemical Accident Prevention Provisions*, in a quantity in excess of the corresponding specified threshold amount.
4. **40 CFR Part 64 Applicability Determination:** The source is not subject to 40 CFR Part 64 - *Compliance Assurance Monitoring for Major Stationary Sources*.
5. **Basis of Regulation Applicability**

- a. **Plant-wide**

OLRDF is a major source for CO, PM₁₀, combined HAPs, and Greenhouse Gases. Regulation 2.16 - *Title V Operating Permits* establishes requirements for major sources.

Regulations 5.00, 5.01, 5.20, 5.21, 5.22 and 5.23 (STAR Program) establishes requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards.

The TAC emissions from motor vehicle fueling or refueling are considered to be "de minimis emissions" by the District. (Regulation 5.21 section 2.6)

The TAC emissions from the combustion of natural gas are considered to be "de minimis emissions" by the District. This includes all of the emissions from a process or process equipment for which the only emissions are the products of combustion of natural gas, such as from a natural gas-fired boiler or turbine, but does not include the other emissions from a process or process equipment that are not the products of the combustion of natural gas. (Regulation 5.21, section 2.7)

The source submitted a revised STAR EA Demonstration for applicable TACs on February 26, 2013. Outer Loop has demonstrated that the plant-wide TAC emissions are either de minimis or compliant with STAR EA goals yielding a cumulative maximum cancer risk of 0.79 using QUASAR modeling.

b. **Applicable Regulations**

Regulation	Title	Type
2.05	Prevention of Significant Deterioration of Air Quality	SIP
2.16	Title V Operating Permits	SIP
5.00	Definitions	Local
5.01	General Provisions	Local
5.02	Adoption and Incorporation by Reference of National Emissions Standards for Hazardous Air Pollutants	Local
5.14	Hazardous Air Pollutants and Source Categories	Local
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	Local
5.21	Environmental Acceptability for Toxic Air Contaminants	Local
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	Local
5.23	Categories of Toxic Air Contaminants	Local
6.45	Standards of Performance for Existing Solid Waste Landfills	SIP
7.02	Adoption of Federal New Source Performance Standards	Local
7.08	Standards of Performance for New Process Operations	SIP
7.12	Standard of Performance for New Storage Vessels for Volatile Organic Compounds	SIP
7.15	Standards of Performance for Gasoline Transfer To New Service Station Storage Tanks (Stage 1 Vapor Recovery)	SIP
7.25	Standards of Performance for New Sources Using Volatile Organic Compounds	SIP
40 CFR 60 Subpart A	General Provisions	Federal
40 CFR 60 Subpart WWW	Standards of Performance for Municipal Solid Waste Landfills	Federal
40 CFR 61 Subpart M	National Emission Standard for Asbestos	Federal
40 CFR 63 Subpart AAAA	National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills	Federal
40 CFR 60, Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Federal
40 CFR 63, Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	Federal
40 CFR 63, Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters	Federal

c. **Basis for Applicability**

Regulation	Basis for Applicability
2.05	The potential uncontrolled CO emissions are greater than 40 tons per year.
2.16	Title V source
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
6.45	Each existing and operating solid waste landfill
7.02	Adoption of Federal New Source Performance Standards
7.08	Equipment installed after September 1, 1976 and subject to the PM emission standard.
7.12	Storage tanks with a capacity greater than 250 gallons constructed after April 19, 1972
7.15	Applies to the transfer of VOC from transport tanks into storage tanks constructed after June 13, 1979
7.25	Affected facility constructed after June 13, 1979 for VOC. The leachate tanks, bioremediation and solidification processes potentially emit VOC, therefore are subject to Regulation 7.25.
40 CFR 60 Subpart A	General Provisions
40 CFR 60 Subpart WWW	The provisions of this subpart apply to each municipal solid waste landfill that commenced construction, reconstruction or modification on or after May 30, 1991.
40 CFR 60, Subpart JJJ	Applies to new, modified, and reconstructed stationary SI engines.
40 CFR 61 Subpart M	The provisions of this subpart are applicable to those sources for active waste disposal sites.
40 CFR 63 Subpart A	These standards regulate specific categories of stationary sources that emit (or have the potential to emit) one or more hazardous air pollutants.
40 CFR 63 Subpart AAAA	Applies to all owners or operates a MSW landfill that has accepted waste since November 8, 1987 or has additional capacity for waste deposition that includes a bioreactor and is a major source.
40 CFR 63, Subpart ZZZZ	Applies to existing, new, and reconstructed stationary engines.
40 CFR 63, Subpart DDDDD	Applies to process heaters located at a major source of HAP.

d. **Emission Unit U1 – Municipal Solid Waste Landfill (MSWL)**

i. **Equipment:**

Emission Point	P/PE	Capacity	Installation Date	Applicable Regulation
E-1	Open Flare #1; Parnel Biogas, Inc.	109.2 MMBtu/hr, 4000 scfm	2008	5.00, 5.01, 5.02, 5.20,
E-2	Open Flare #2; Parnel Biogas, Inc.	109.2 MMBtu/hr, 4000 scfm	2008	5.21, 5.22, 5.23, 6.45, 7.02
E-3	Open Flare #3; LFG Specialties, LLC	128 MMBtu/hr, 4200 scfm	1994	40 CFR 60 Subpart WWW 40 CFR 61 Subpart M 40 CFR 63 Subpart AAAA

ii. **Standards/Operating Limits**

1) **CO**

(a) Permit 422-08-C (R1) contained the following requirement in order to avoid complying with Regulation 2.05, the company requested the 234 tons per year pre-Unit 8 expansion limit as a PSD avoidance limit.

(b) Permit 422-08-C (R1) contained the following requirement in order to avoid applicability of Regulation 2.05, the company requested the 249 tons per year limit for the Unit 8 expansion as a PSD avoidance limit.

2) **Opacity**

Regulation 40 CFR 60.18 contains general control device and work practice requirements.

3) **NMOC**

(a) Regulation 6.45 requires landfills to design a collection system that shall effectively capture the gas that is generated from the landfill to less than 167 tons per calendar year NMOC.

(b) Regulation 40 CFR 60 Subpart WWW sets forth timetables for gas collection, operating wellhead parameters, and surface methane concentrations.

(c) The Non Methane Organic Compounds (NMOC) emission rate report was received by the District on May 30, 1996. The facility’s initial design capacity report was submitted by May 30, 1997. A revised NSPS Landfill Gas Collection and Control Design Plan was received by the District on January 10, 2010 as required. Revision 4 was submitted August 6, 2012. This report also includes the acceptable pressure measurements below the geomembrane.

4) **Asbestos**

Regulation 40 CFR 61 Subpart M requires asbestos containing material to be daily covered with non-asbestos containing material and a resinous or petroleum-based dust suppression agent.

5) **HAP**

Regulation 40 CFR 63 Subpart AAAA requires each new landfill cell to be connected to the collection and control system prior to initiating liquids addition in that area.

The bioreactor areas in Units 5 and 7 are part of a research and development project between Waste Management and the United States Environmental Protection Agency performed under a Cooperative Research and Development Agreement (CRADA).

6) **TAC**

The Environmental Acceptability demonstration was based upon an annual waste disposal rate of 1,000,000 tons of putrescible municipal solid waste, therefore this rate serves as an alternative measure as required by Regulation 5.21, section 4.3.

iii. **Monitoring and Record Keeping**1) **CO**

Regulation 2.16, sections 4.1.9.1-2 establish monitoring and record keeping to ensure ongoing compliance with the terms and conditions of the permit.

CO emissions will be calculated using the following equation:

$$\text{Monthly CO} = \text{Monthly Landfill Gas Generation (MMCF/month)} \times 0.37 \text{ lb/MMBtu} \times 1,012 \text{ MMBtu/MMCF} \times 1 \text{ ton}/2000 \text{ lb} \times 50\% \text{ methane}$$
2) **Opacity**

Regulation 2.16, sections 4.1.9.1-2 establish monitoring and record keeping to ensure ongoing compliance with the terms and conditions of the permit.

3) **NMOC**

(a) District Regulation 6.45's monitoring requirements are duplicated in 40 CFR 60 Subpart WWW.

(b) Regulation 40 CFR 60 Subpart WWW sets forth monitoring procedures for surface emission monitoring, and the gas collection and control system.

4) **Asbestos**

Regulation 40 CFR 61 Subpart M requires specific records when asbestos containing material is received.

5) **HAP**

Regulation 40 CFR 63 Subpart AAAA requires the non-leachate liquids in the bioreactor to meet specific percent moisture content.

6) **TAC**

Regulation 2.16, sections 4.1.9.1-2 establish monitoring and record keeping to ensure ongoing compliance with the terms and conditions of the permit.

iv. **Reporting**

1) **CO**

Regulation 2.16, section 4.1.9.3 establishes reporting to ensure ongoing compliance with the terms and conditions of the permit.

2) **Opacity**

Regulation 2.16, section 4.1.9.3 establishes reporting to ensure ongoing compliance with the terms and conditions of the permit.

3) **NMOC**

(a) District Regulation 6.45 does not require any specific reporting requirements for NMOC, however, Regulation 2.16, section 4.1.9.3 requires sufficient reporting to ensure ongoing compliance with the terms and conditions of the permit.

(b) Regulation 40 CFR 60 Subpart WWW sets forth reporting requirements when monitored parameters have exceedances.

4) **Asbestos**

Regulation 40 CFR 61 Subpart M requires instances of improperly covered waste, discrepancies between shipment records and actual quantities and if asbestos-containing waste material will be excavated be reported to the District.

5) **HAP**

(a) Regulation 40 CFR 63 Subpart AAAA requires actions taken to be reported if the SSM plan is not followed.

(b) Federal Regulation 40 CFR 63.1980(a) requires the annual report described in 40 CFR 60.757(f) to be submitted semi-annually.

6) **TAC**

Regulation 2.16, section 4.1.9.3 establishes reporting to ensure ongoing compliance with the terms and conditions of the permit.

e. **Emission Unit U2 – Leachate Pre-treatment (SBR)**

i. **Equipment:**

Emission Point	P/PE	Capacity	Installation Date	Applicable Regulation
E-4	Process heater	2.0 MMBtu/hr	1995	40 CFR 63 Subpart DDDDD
E-4a	Tank SBR 200	327,800 gal	1996	5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.25 (non BACT)
E-4b	Tank SBR 300	327,800 gal	1996	
E-4c	Tank SBR 400	288,012 gal	2004	
E-4d	Tank SBR 500	288,012 gal	2004	
E-4e	Tank SBR 600	303,573 gal	2011	
E-4f	Tank SBR 700	303,573 gal	2011	

ii. **Standards/Operating Limits**

1) **VOC**

Regulation 7.25 requires an affected facility to be equipped with and utilize best available control technology (BACT).

2) **TAC**

The Environmental Acceptability demonstration was based upon an annual treated discharge rate of 262,800,000 gallons of leachate, therefore this rate serves as an alternative measure as required by Regulation 5.21, section 4.3.

iii. **Monitoring and Record Keeping**

1) **VOC**

Regulation 7.25 does not require any specific monitoring or record keeping requirements for VOC, however, Regulation 2.16, sections 4.1.9.1-2 establish monitoring and record keeping to ensure ongoing compliance with the terms and conditions of the permit.

VOC emissions shall be calculated using the following equation:

$$\text{Monthly VOC} = \text{Monthly Leachate Generation (gal/month)} \times 3.785 \text{ L/gal} \times 1 \text{ g/1,000,000 } \mu\text{g} \times \text{VOC concentration (}\mu\text{g/L)} \times 1 \text{ lb/453.6 g} \times 1 \text{ ton/2000 lb}$$

2) **TAC**

Regulation 2.16, sections 4.1.9.1-2 establish monitoring and record keeping to ensure ongoing compliance with the terms and conditions of the permit.

TAC emissions will be calculated using the following equation:

$$\text{Monthly TAC} = \text{Monthly Leachate Generation (gal/month)} \times 3.785 \text{ L/gal} \times 1 \text{ g/1,000,000 } \mu\text{g} \times \text{TAC concentration (}\mu\text{g/L)} \times 1 \text{ lb/453.6 g} \times 1 \text{ ton/2000 lb}$$

iv. **Reporting**

1) **VOC**

Regulation 7.25 does not require any specific reporting requirements for VOC, however, Regulation 2.16, section 4.1.9.3 requires sufficient reporting to ensure ongoing compliance with the terms and conditions of the permit.

2) **TAC**

Regulation 2.16, section 4.1.9.3 establishes reporting to ensure ongoing compliance with the terms and conditions of the permit.

f. **Emission Unit U3 – Bioremediation of Contaminated Soil**

i. **Equipment:**

Emission Point	P/PE	Capacity	Installation Date	Applicable Regulation
E-5	Bioremediation soil piles	NA	1995	5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.25 (non BACT)

ii. **Standards/Operating Limits**

1) **VOC**

Regulation 7.25 requires an affected facility to be equipped with and utilize best available control technology (BACT).

2) **TAC**

The Environmental Acceptability demonstration was based upon an annual bioremediation of 8,000 tons of contaminated soil, therefore this rate serves as an alternative measure as required by Regulation 5.21, section 4.3.

iii. **Monitoring and Record Keeping**

1) **VOC**

Regulation 7.25 does not require any specific monitoring or record keeping requirements for VOC, however, Regulation 2.16, sections 4.1.9.1-2 establish monitoring and record keeping to ensure ongoing compliance with the terms and conditions of the permit.

VOC emissions shall be calculated using the following equation:
 Monthly VOC = {Tons of Soil Processed (ton/month) × [TPH_{before} (ppm) × (1 - Biodegradation efficiency) - TPH_{after} (ppm) (1 - Control efficiency)]} ÷ 10⁶

TPH_{before} = Total Petroleum Hydrocarbon Concentration before remediation (ppm)

TPH_{after} = Total Petroleum Hydrocarbon Concentration after remediation (ppm)

Biodegradation efficiency = 80%

Control efficiency = 95% for activated carbon

2) **TAC**

Regulation 2.16, sections 4.1.9.1-2 establish monitoring and record keeping to ensure ongoing compliance with the terms and conditions of the permit.

TAC emissions shall be calculated using the following equation:
 Monthly TAC = {Tons of Soil Processed (ton/month) × [TAC_{before} (ppm) × (1 - Biodegradation efficiency) - TAC_{after} (ppm) (1 - Control efficiency)] ÷ 10⁶

TAC_{before} = Total Petroleum Hydrocarbon Concentration before remediation (ppm)

TAC_{after} = Total Petroleum Hydrocarbon Concentration after remediation (ppm)

Biodegradation efficiency = 80%

Control efficiency = 95% for activated carbon

iv. **Reporting**

1) **VOC**

Regulation 7.25 does not require any specific reporting requirements for VOC, however, Regulation 2.16, section 4.1.9.3 requires sufficient reporting to ensure ongoing compliance with the terms and conditions of the permit.

2) **TAC**

Regulation 2.16, section 4.1.9.3 establishes reporting to ensure ongoing compliance with the terms and conditions of the permit.

g. **Emission Unit U4 – Gasoline Storage Tank**

i. **Equipment:**

Emission Point	P/PE	Capacity	Installation Date	Applicable Regulation
E-6	Gasoline Storage Tank	1,000 gallon	1991	5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.12, 7.15

ii. **Standards/Operating Limits**

1) **VOC**

Regulations 7.12 and 7.15 both require a submerged fill pipe.

2) **TAC**

The TAC emissions from motor vehicle fueling or refueling are considered to be “de minimis emissions” by the District. (Regulation 5.21 section 2.6)

iii. **Monitoring and Record Keeping**

1) **VOC**

The compliance monitoring requirements in Regulation 7.12 do not apply to this equipment. Regulation 2.16, section 4.1.9.2 requires sufficient record keeping to ensure compliance with the terms and conditions of the permit.

2) **TAC**

The TAC emissions from motor vehicle fueling or refueling are considered to be “de minimis emissions” by the District. (Regulation 5.21 section 2.6)

iv. **Reporting**

1) **VOC**

Regulations 7.12 and 7.15 do not require any specific reporting requirements for VOC, however, Regulation 2.16, section 4.1.9.3 requires reporting to ensure compliance with the terms and conditions of the permit.

2) **TAC**

The TAC emissions from motor vehicle fueling or refueling are considered to be “de minimis emissions” by the District. (Regulation 5.21 section 2.6)

h. **Emission Unit U5 – Liquid Solidification**

i. **Equipment:**

Emission Point	P/PE	Capacity	Installation Date	Applicable Regulation
E-7	Solidification mixing area	NA	1997	1.14, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.25 (non BACT)

ii. **Standards/Operating Limits**

1) **VOC**

Regulation 7.25 requires an affected facility to be equipped with and utilize best available control technology (BACT).

2) **Opacity/PM**

Regulation 1.14, sections 2.3 and 2.4 limits the fugitive emissions to twenty percent (20%) opacity and no visible fugitive emissions beyond the property line.

3) **TAC**

The Environmental Acceptability demonstration was based upon the maximum concentration of waste allowed to be accepted at the facility per 40 CFR 261.24, therefore these converted rates serve as alternative measures as required by Regulation 5.21, section 4.3.

iii. **Monitoring and Record Keeping**

1) **VOC**

Regulation 7.25 does not require any specific monitoring or record keeping requirements for VOC, however, Regulation 2.16, sections 4.1.9.1-2 establish monitoring and record keeping to ensure ongoing compliance with the terms and conditions of the

permit.

VOC emissions shall be calculated using the following equation:

$$\text{Monthly VOC} = \text{Monthly Hours of operation (hr/month)} \times 0.42 \text{ lb VOC/hr} \times 1 \text{ ton/2000 lb}$$

2) **Opacity/PM**

Regulation 1.14 does not require any specific monitoring or record keeping requirements for Opacity/PM, however, Regulation 2.16, sections 4.1.9.1-2 establish monitoring and record keeping to ensure ongoing compliance with the terms and conditions of the permit.

3) **TAC**

Regulation 2.16, sections 4.1.9.1-2 establish monitoring and record keeping to ensure ongoing compliance with the terms and conditions of the permit.

$$\text{Monthly TAC} = \text{Monthly Hours of operation (hr/month)} \times \text{TAC E.F. (lb/hr)}$$

iv. **Reporting**

1) **VOC**

Regulation 7.25 does not require any specific reporting requirements for VOC, however, Regulation 2.16, section 4.1.9.3 requires reporting to ensure compliance with the terms and conditions of the permit.

2) **Opacity/PM**

Regulation 1.14 does not require any specific reporting requirements for VOC, however, Regulation 2.16, section 4.1.9.3 requires reporting to ensure compliance with the terms and conditions of the permit.

3) **TAC**

Regulation 2.16, sections 4.1.9.3 establishes reporting to ensure ongoing compliance with the terms and conditions of the permit.

i. **Emission Unit U6 – Truck Traffic**

i. **Equipment:**

Emission Point	P/PE	Capacity	Installation Date	Applicable Regulation
E-8	Fugitive dust from truck traffic	NA	1969	N/A

ii. **Standards/Operating Limits**

PM

Permit 422-08-C (R1) required periodic dust suppression.

iii. **Monitoring and Record Keeping**

PM

Regulation 2.16, sections 4.1.9.1-2 establish monitoring and record keeping to ensure ongoing compliance with the terms and conditions of the permit.

PM emissions will be calculated using the following equation:

$$PM = E \text{ (Emission Factor, lb/VMT)} \times VMT \text{ (miles)} \div 2000 \text{ (lb/ton)} \times 15\%$$

iv. **Reporting**

PM

Regulation 2.16, section 4.1.9.3 requires reporting to ensure compliance with the terms and conditions of the permit.

j. **Emission Unit U7 – Paint Booth**

i. **Equipment:**

Emission Point	P/PE	Capacity	Installation Date	Applicable Regulation
E-9	Paint booth	NA	1989	5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.08, 7.59

The equipment or processes covered by this permit are not currently subject to the standards of the NESHAP, 40 CFR 63 subpart M. The subpart does not apply to surface coating that occurs as facility maintenance operations. As defined in the subpart the activity would be considered facility maintenance.

ii. **Standards/Operating Limits**

1) **VOC**

(a) In accordance with Regulation 2.16, section 3.5.4.7, the source requested a five ton per year limit for this equipment in their Title V Permit renewal application.

(b) Any affected facility shall be exempt from Regulation 7.59, section 3 (Standards for Volatile Organic Compound) if the total VOC emissions from all affected facilities subject to this regulation are less than or equal to five tons per year.

2) **PM**

(a) In accordance with Regulation 7.08, section 3.1.2, Table 1, since the process rate for this equipment is less than 0.5 ton/hr, the emission standard for PM is 2.34 lb/hr.

(b) Using the minimum spray gun transfer efficiency of 35%, the percent solids of the material (45.9%), and the efficiency of the filters (greater than 90%), the PM emission limit of the spray booth cannot be exceeded.

3) **Opacity**

Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

4) **TAC**

The TAC de minimis values serve as alternate measures as required by Regulation 5.21, section 4.3.

iii. **Monitoring and Record Keeping**

1) **VOC**

When coating metal parts, the source is required to meet the monitoring and record keeping requirements in accordance with Regulation 7.59, section 6.

2) **Opacity/PM**

Regulation 7.08 does not require any specific monitoring and record keeping requirements for opacity and PM, however, Regulation 2.16, sections 4.1.9.1-2 require sufficient monitoring and record keeping to ensure ongoing compliance with the terms and conditions of the permit.

3) **TAC**

Regulation 2.16, sections 4.1.9.1-2 establish monitoring and record keeping to ensure ongoing compliance with the terms and conditions of the permit.

iv. **Reporting**

1) **VOC**

Regulation 7.59 does not require any specific reporting requirements for VOC, however, Regulation 2.16, section 4.1.9.3 requires sufficient reporting to ensure ongoing compliance with the terms and conditions of the permit. The source is required to identify all deviations from permit requirements for each pollutant and report semi-annually.

2) **Opacity/PM**

Regulation 5.21 does not require any specific reporting requirements for VOC, however, Regulation 2.16, section 4.1.9.3 requires sufficient reporting to ensure ongoing compliance with the terms and conditions of the permit. The source is required to identify all deviations from permit requirements for each pollutant and report semi-annually.

3) **TAC**

Regulation 2.16, section 4.1.9.3 establishes reporting to ensure ongoing compliance with the terms and conditions of the permit.

k. **Emission Unit IA1 – CNG Generator**

i. **Equipment:**

Emission Point	P/PE	Capacity	Installation Date	Applicable Regulation
IA1	Emergency Generator for the Compressed Natural Gas fueling operation	105 hp	2012	40 CFR 60 Subpart JJJJ 40 CFR 63 Subpart ZZZZ

ii. Standards/Operating Limits**1) Unit Operations**

(a) Regulation 40 CFR 60 Subpart JJJJ limits non-emergency operating hours (maintenance checks and readiness testing) to 100 hours per year, but additional hours may be requested from the District.

(b) Regulation 40 CFR 60 Subpart JJJJ requires the engine to be certified to meet the standards in Table 1 of the subpart. The EPA Certificate of Conformity submitted to the District on October 11, 2012 for the emergency generator certify the CO and NO_x emissions for the family of engines that includes the 105 hp natural gas fueled engine meets the EPA emission standard requirements.

2) CO

Regulation 40 CFR 60 Subpart JJJJ has CO limits for spark ignition engines.

3) NO_x

Regulation 40 CFR 60 Subpart JJJJ has NO_x limits for spark ignition engines that are stated as NO_x + HC.

iii. Monitoring and Record Keeping**1) Unit Operations**

(a) Regulation 2.16, sections 4.1.9.1-2 establish monitoring and record keeping to ensure ongoing compliance with the terms and conditions of the permit.

(b) Regulation 40 CFR 60 Subpart JJJJ requires keeping records showing when periodic maintenance is performed.

2) CO

The source must maintain a copy of the EPA Certificate of Conformity to show the engine meets the emission standards of Regulation 40 CFR 60 Subpart JJJJ.

3) NO_x

The source must maintain a copy of the EPA Certificate of Conformity to show the engine meets the emission standards of Regulation 40 CFR 60 Subpart JJJJ.

iv. Reporting**1) Unit Operations**

Regulation 2.16, section 4.1.9.3 requires reporting to ensure compliance with the terms and conditions of the permit.

2) CO/NO_x

There are no routine compliance reporting requirements for this equipment.

III. Other Requirements

1. **Temporary Sources:** The source did not request to operate any temporary facilities.
2. **Short Term Activities:** The source did not report any short term activities.
3. **Emissions Trading:** N/A
4. **Alternative Operating Scenarios:** The source did not request an alternative operating scenario in its Title V application.
5. **Compliance History**

Date	Regulation Violated	Result
5/23/1995	2.03, Section 6.1, Permit Conditions Not in Accordance With Application	Settled
1/1/2007	5.21, Section 4.1, Environmental Acceptability Demonstration	Agreement
8/25/2009	2.03, Section 5.2, Permit Conditions: Binding	Agreement
6/29/2011	1.14, Section 2.4, Fugitive: Visible Past Property Line	Settled

Waste Management is required to submit their annual Compliance Certification to the District on or before April 15th of each calendar year. As of the effective date of Permit 149-97-TV (R1), there are no compliance schedules in effect or progress reports required.

6. **Emission Factors:** The following emission factors shall be used unless more accurate District approved emission factors become available.

Emission Unit	Pollutant	Emission Factor	Unit
U1 – Landfill flare	CO	0.37	lb/MMBtu
U1 – Landfill flare	NO _x	0.068	lb/MMBtu
U2 – SBR	VOC	2,793.5	µg/L
U2 – SBR	1,1,2,2-Tetrachloroethane	9.7	µg/L
U2 – SBR	1,2-Dibromo-3-chloropropane	9.3	µg/L
U2 – SBR	1,2-Dibromomethane (EDB)	8.3	µg/L
U2 – SBR	Acrolein	110	µg/L
U2 – SBR	Acrylonitrile	100	µg/L
U2 – SBR	Carbon Tetrachloride	94	µg/L
U2 – SBR	Ethylbenzene	210	µg/L
U5 – Solidification	Chloroform	0.008	lb/hr
U5 – Solidification	1,4-Dichlorobenzene	0.009	lb/hr

7. **Insignificant Activities**

Equipment	Quantity	PTE (tpy)	Reg. Basis
Landfill Gas Compressor/Pressure Washer	2	VOC (0.43)	2.16, section 1.23.1.1
CNG Refueling Facility [IA Comment 6) Error! Reference source not found.]	1	VOC (0.023)	2.16, section 1.23.1.1
Sorting Process	1	PM ₁₀ (2.47)	2.16, section 1.23.1.1
Space Heaters (Total)	18	NO _x (0.74)	2.16, section 1.23.1.1
Internal combustion engines			
#1 Generator (Backup & Portable) (CI)	1	NO _x (0.12)	2.02, section 2.2
#2 Generator (Light Plant & Portable) (CI)	1	NO _x (0.91)	2.02, section 2.2
Compressor (Portable) (CI)	1	NO _x (1.74)	2.02, section 2.2

Equipment	Quantity	PTE (tpy)	Reg. Basis
Pressure Washer (Portable) (CI)	1	NO _x (0.32)	2.02, section 2.2
Tub grinder (Portable) (CI)	1	NO _x (1.36)	2.02, section 2.2
CNG Generator (Emergency) (SI)	1	CO (1.14)	2.02, section 2.2
Storage Tanks (lubricating oil)	11	VOC (0.01)	2.02, section 2.3.9.2
Cold solvent parts cleaner [IA Comment 7]]	1	VOC (0.00)	2.02, section 2.3.22
Storage Tanks (portable)	1	VOC (0.00)	2.02, section 2.3.23
Storage Tanks (diesel fuel)	5	VOC (0.01)	2.02, section 2.3.25

- 1) Insignificant activities identified in District Regulation 2.02 section 2 may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16 section 3.5.4.1.4.
- 2) Insignificant activities identified in District Regulation 2.02 section 2 shall comply with generally applicable requirements as required by Regulation 2.16 section 4.1.9.4.
- 3) In lieu of recording annual throughputs and calculating actual annual emissions, the owner or operator may elect to report the Pollutant Potential To Emit quantity listed in the Insignificant Activities table, as the annual emission for each piece of equipment, since the emissions from the source's Insignificant Activities are very minor in comparison to the plant wide emissions.
- 4) The Insignificant Activities Table is correct as of the date the permit was proposed for review by U.S. EPA, Region 4.
- 5) The owner or operator shall submit an updated list of insignificant activities that occurred during the preceding year pursuant to Regulation 2.16 section 4.3.5.3.6.
- 6) The VOC emissions are from natural gas leakage when uncoupling the fill hose to vehicles.
- 7) The District determined that Regulation 6.18 does not apply based on the MSDS for ARMAKLEEN MPC Cleaning solution which the source submitted May 30, 2012.