ENVIRONMENTAL INFORMATION LOGISTICS, LLC
4463 Hilltop Drive
New Franklin, OH 44203
Phone: 630-209-3931
www.eilllc.com

June 1, 2023

Ms. Amy Tempus-Doom
Division for Air Quality - Permit Review Branch
300 Sower Blvd., 2nd Floor
Frankfort, KY 40601
Submitted Electronically – Kentucky Business One Stop Portal

RE: Epperson Waste Disposal Landfill Inc., Williamstown, KY
Source I.D. No. 21-081-00018
Title V Operating Permit V-18-030 – Renewal Application

Dear Ms. Tempus-Doom:

The Epperson Waste Disposal Landfill Inc. (Epperson) located in Williamstown, Kentucky was issued a Title V Operating Permit Renewal on December 8, 2018. 401 KAR 52:020 Section 12 and Condition G.2.a require submittal of a timely and complete renewal application six months before permit expiration. For Epperson, that date corresponds to June 8, 2023.

Enclosed is a pdf of the application with the Responsible Official signature. The application consists of the following:

- Emissions Calculation Updates for significant activities and an updated list of insignificant activities;
- Application forms;
- New applicable federal requirements: 40 CFR Part 62 (Federal Plan), Subpart OOO and 40 CFR 63, Subpart AAAA (Revised Landfill NESHAP); and
- List of non-applicable state and federal requirements for permit shield coverage.

Environmental Information Logistics is submitting the application on behalf of the landfill owner, Republic Services of KY, LLC. If you have any questions or comments, please call me at (630) 209-3931 or David Vasbinder of Epperson Waste Disposal Landfill at (314) 249-9404.

Sincerely,
Environmental Information Logistics, LLC

Emily M. Nelson
Senior Project Manager

cc: David Vasbinder, Epperson Waste Disposal Landfill

Epperson Waste Disposal Landfill
SOURCE I.D. #21-081-00018

Application for Renewal of a Title V Permit

Williamstown

Grant County, Kentucky

June 2023

Prepared by:

Environmental Information Logistics, LLC
130 E. Main Street
Caledonia, MI 49316

TABLE OF CONTENTS

SECTION

APPENDICES

INTRODUCTION

Republic Services of KY, LLC (Republic) owns and operates the Epperson Landfill (Epperson), a municipal solid waste landfill located in Williamstown, Grant County, Kentucky. Grant County has been designated as attainment for all criteria pollutants.

On December 8, 2018, the Kentucky Department for Environmental Protection issued a Title 5 Operating Permit (Air Quality General Permit) for the facility. The permit expires on December 8, 2023, and per General Condition G.2.a, a renewal application is due six months prior to the expiration date of the permit (i.e., by June 8, 2023). Epperson is requesting a renewal of the Title 5 Air Quality General Permit, with appropriate updates, clarifications, and modifications, in accordance with 401 KAR 52:020 Section 12.

The current permit includes the following significant emission units:

Emissions Unit No.	**Emissions Unit Description**
004	Municipal Solid Waste (MSW) Landfill
001a	Landfill Flare
003	Paved and Unpaved Haul Roads
005	Site Construction
006	550 Gallon Gasoline Storage Tank & Dispensing

There is one new significant emissions unit to add for this renewal application. The facility is scheduled to be permanently closed and final cover must therefore be placed. A new emissions unit is therefore requested:

007	Final Cover Placement

Calculations are provided in Appendix A for the estimated vehicle miles traveled (VMT) from the articulated trucks hauling final cover soils from on-site borrow areas.

The following emissions unit should be removed from the permit, since it is no longer present at this site:

006	550 Gallon Gasoline Storage Tank & Dispensing

The following insignificant emissions units were identified in the current permit:

- Five Leachate Tanks (30,000 gallons each)
- Leachate Tank (261,750 gallons)
- Two Diesel Tanks (8,000 gallons each)
- Diesel Tank (422 gallons)
- One parts cleaner station
- Propane Tank (1000 gallons)
- Propane Tank (500 gallons)
- Propane Tank (20 gallons)

All of the above-listed insignificant emissions units are still present at the facility; none have been removed. There are no new significant activities to add for this renewal application.

A summary of additional requested updates to the current permit are provided in this application. These include:

- Emissions calculation updates for the landfill and haul roads (Appendix A);
- New applicable regulations (40 CFR 62 Subpart OOO and revised 40 CFR 63 Subpart AAAA); and
- List of non-applicable state and federal requirements for permit shield coverage.

Application forms are provided in Section 2. A site map is included in Appendix B, and a process flow diagram is provided in Appendix C.

Newly Applicable/Revised Federal Regulations

40 CFR 62, Subpart OOO (Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014): On May 21, 2021, the Federal Register published the federal plan requirements for municipal solid waste (MSW) landfills that commenced construction before July 17, 2014, such as Epperson, and are in states where a state plan has not been approved, such as Kentucky. The rule, 40 CFR 62, Subpart OOO (Federal Plan), went into effect on June 21, 2021. This closes the loop to allow landfills in Kentucky to smoothly transition into the requirements of the revised NESHAP. Epperson is considered a Legacy Controlled Landfill (as defined in §62.16730), and as such, was not required to submit several reports or comply with the "Increments of Progress" in §62.16712 of the Federal Plan.

The Landfill NESHAP (40 CFR 63 Subpart AAAA) revisions were promulgated on March 26, 2020, and became effective September 27, 2021. All of the operational standards, compliance and monitoring requirements of the Federal Plan (§62.16717, §62.16720 & §62.16722, respectively) are now superseded by their equivalent NESHAP counterpart (§63.1958, §63.1960 & §63.1961, respectively). Additionally, selective recordkeeping and reporting requirements of the Federal Plan (§62.16724(h), (k) & (q) and §62.16726(e)) are also now superseded by their equivalent provisions of the revised Landfill NESHAP (§63.1981(h), (j) & (k) and §63.1983(e), respectively).

Only the relevant provisions of the Federal Plan which have not been superseded by the Landfill NESHAP should be incorporated. These include the following regulatory citations:

- §62.16710(a) – Scope
- §62.16711(a), (d) – (f) & (h) – Designated Facilities
- §62.16714(a), (b), (c)(2) – (4) & (f) – Standards for MSW Landfill Emissions
- §62.16718(b) – (e) – Test Methods
- §62.16724(d)(6) & (7), (e) – (g), (j) & (l) - Reporting
- §62.16726(a) – (d), (e)(6) & (h) – (j) – Recordkeeping
- §62.16728 – Specifications for Active Systems
- §62.16730 – Definitions

40 CFR 63, Subpart AAAA (Revised – National Emissions Standards for Hazardous Air Pollutants – Municipal Solid Waste Landfills): As stated previously, on March 26, 2020 the EPA promulgated substantial revisions to the Landfill NESHAP (40 CFR 63 Subpart AAAA). The intent was to incorporate the monitoring, recordkeeping, reporting and compliance provisions of the Landfill NSPS (40 CFR 60 Subparts Cf and XXX) into the revised Landfill NESHAP and make the NESHAP the primary air compliance regulation for landfill compliance. These provisions become effective after September 27, 2021. Also on March 26, 2020, the EPA revised the Landfill NSPS to provide a sunset date for 40 CFR 60 Subpart WWW once the MSW landfill "*Becomes subject to the more stringent requirements in an approved and effective state or federal plan that implements subpart Cf of this part"* (see §60.750(d)(1)). On May 21, 2021, the Federal Register published the federal plan requirements for municipal solid waste (MSW) landfills that commenced construction before July 17, 2014. Epperson is subject to the Federal Plan as stated above. Since the NESHAP is now primarily the governing federal air regulation for landfills, the renewal permit issued for Epperson should incorporate the revised NESHAP and remove all prior references to 40 CFR 60 Subpart WWW.

APPLICATION FORMS

The following application forms are included in this section:

DEP Form 7007AI – Administrative Information
DEP Form 7007B – Manufacturing or Process Operations
DEP Form 7007N – Emissions, Stacks and Controls Information
DEP Form 7007V – Applicable Requirements & Compliance Activities
DEP Form 7007CC – Compliance Certification
DEP Form 7007DD – Insignificant Activities
DEP Form 7007GG – Control Equipment
DEP Form 7007HH – Haul Roads

DEP FORM 7007AI

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007AI

Administrative Information

___ Section AI.1: Source Information

___ Section AI.2: Applicant Information

___ Section AI.3: Owner Information

___ Section AI.4: Type of Application

___ Section AI.5: Other Required Information

___ Section AI.6: Signature Block

___ Section AI.7: Notes, Comments, and Explanations

Additional Documentation

___ Additional Documentation attached

Source Name: **Republic Services of Kentucky, LLC d/b/a Epperson Waste Disposal, Inc.**

KY EIS (AFS) #: **21- 081-00018**

Permit #: **V-18-030**

Agency Interest (AI) ID: **1483**

Date: **6/1/2023**

Section AI.1: Source Information

Physical Location Address:	**Street:**	2360 Cynthiana Road				
	City:	Williamstown	**County:**	KY	**Zip Code:**	41097
Mailing Address:	**Street or P.O. Box:**	2360 Cynthiana Road				
	City:	Williamstown	**State:**	KY	**Zip Code:**	41097

Standard Coordinates for Source Physical Location

Longitude: 84.32 (decimal degrees) **Latitude:** 38.3711 (decimal degrees)

Primary (NAICS) Category: Solid Waste Landfill **Primary NAICS #:** 562212

Classification (SIC) Category: Refuse Systems **Primary SIC #:** 4953

Briefly discuss the type of business conducted at this site: This site is a permitted municipal solid waste landfill.

Description of Area Surrounding Source: ☑ Rural Area ☐ Industrial Park ☐ Residential Area ☐ Urban Area ☐ Industrial Area ☐ Commercial Area

Is any part of the source located on federal land? ☐ Yes ☑ No

Number of Employees: 0

Approximate distance to nearest residence or commercial property: *127*

Property Area: **408**

Is this source portable? ☐ Yes ☑ No

What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?

NPDES/KPDES:	☑ Currently Hold	☐ Need	☐ N/A
Solid Waste:	☑ Currently Hold	☐ Need	☐ N/A
RCRA:	☐ Currently Hold	☐ Need	☐ N/A
UST:	☐ Currently Hold	☐ Need	☐ N/A

Type of Regulated Waste Activity:

☐ Mixed Waste Generator ☐ Generator ☐ Recycler ☐ Other: _____

☐ U.S. Importer of Hazardous Waste ☐ Transporter ☑ Treatment/Storage/Disposal Facility ☐ N/A

Section AI.2: Applicant Information

Applicant Name: Republic Services of Kentucky, LLC d/b/a Epperson Waste Disposal, Inc.

Title: (if individual)

Mailing Address:
Street or P.O. Box: 2360 Cynthiana Road
City: Williamstown **State:** KY **Zip Code:** 41097

Email: (if individual)

Phone: 314-249-9404

Technical Contact

Name: David Vasbinder

Title: Environmental Manager

Mailing Address:
Street or P.O. Box: 1700 Holzer Drive
City: Arnold **State:** MO **Zip Code:** 63010

Email: dvasbinder@republicservices.com

Phone: 314-249-9404

Air Permit Contact for Source

Name: Emily M. Nelson

Title: Senior Project Manager

Mailing Address:
Street or P.O. Box: 4463 Hilltop Drive
City: New Franklin **State:** OH **Zip Code:** 44203

Email: enelson@eilllc.com

Phone: 630-209-3931

Section AI.3: Owner Information

☑ **Owner same as applicant**

Name: _____

Title: _____

Mailing Address: **Street or P.O. Box:** _____

City: _____ **State:** _____ **Zip Code:** _____

Email: _____

Phone: _____

List names of owners and officers of the company who have an interest in the company of 5% or more.

Name	Position

Section AI.4: Type of Application

Current Status: ☑ Title V ☐ Conditional Major ☐ State-Origin ☐ General Permit ☐ Registration ☐ None

Requested Action: *(check all that apply)*

☐ Name Change	☐ Initial Registration	☐ Significant Revision	☐ Administrative Permit Amendment
☑ Renewal Permit	☐ Revised Registration	☐ Minor Revision	☐ Initial Source-wide OperatingPermit
☐ 502(b)(10)Change	☐ Extension Request	☐ Addition of New Facility	☐ Portable Plant Relocation Notice
☐ Revision	☐ Off Permit Change	☐ Landfill Alternate Compliance Submittal	☐ Modification of Existing Facilities
☐ Ownership Change	☐ Closure		

Requested Status: ☑ Title V ☐ Conditional Major ☐ State-Origin ☐ PSD ☐ NSR ☐ Other: _____

Is the source requesting a limitation of potential emissions? ☐ Yes ☑ No

Pollutant:	Requested Limit:	Pollutant:	Requested Limit:
☐ Particulate Matter		☐ Single HAP	
☐ Volatile Organic Compounds (VOC)		☐ Combined HAPs	
☐ Carbon Monoxide		☐ Air Toxics (40 CFR 68, Subpart F)	
☐ Nitrogen Oxides		☐ Carbon Dioxide	
☐ Sulfur Dioxide		☐ Greenhouse Gases (GHG)	
☐ Lead		☐ Other	

For New Construction:

Proposed Start Date of Construction: *(MM/YYYY)* _____ **Proposed Operation Start-Up Date:** *(MM/YYYY)* _____

For Modifications:

Proposed Start Date of Modification: *(MM/YYYY)* _____ **Proposed Operation Start-Up Date:** *(MM/YYYY)* _____

Applicant is seeking coverage under a permit shield. ☑ **Yes** ☐ **No** **Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.**

Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

- ☐ DEP7007A Indirect Heat Exchangers and Turbines
- ☑ DEP7007B Manufacturing or Processing Operations
- ☐ DEP7007C Incinerators and Waste Burners
- ☐ DEP7007F Episode Standby Plan
- ☐ DEP7007J Volatile Liquid Storage
- ☐ DEP7007K Surface Coating or Printing Operations
- ☐ DEP7007L Mineral Processes
- ☐ DEP7007M Metal Cleaning Degreasers
- ☑ DEP7007N Source Emissions Profile
- ☐ DEP7007P Perchloroethylene Dry Cleaning Systems
- ☐ DEP7007R Emission Offset Credit
- ☐ DEP7007S Service Stations
- ☐ DEP7007T Metal Plating and Surface Treatment Operations
- ☑ DEP7007V Applicable Requirements and Compliance Activities
- ☐ DEP7007Y Good Engineering Practice and Stack Height Determination
- ☐ DEP7007AA Compliance Schedule for Non-complying Emission Units
- ☐ DEP7007BB Certified Progress Report
- ☑ DEP7007CC Compliance Certification
- ☑ DEP7007DD Insignificant Activities
- ☐ DEP7007EE Internal Combustion Engines
- ☐ DEP7007FF Secondary Aluminum Processing
- ☐ DEP7007GG Control Equipment
- ☑ DEP7007HH Haul Roads
- ☐ Confidentiality Claim
- ☐ Ownership Change Form
- ☐ Secretary of State Certificate
- ☑ Flowcharts or diagrams depicting process
- ☐ Digital Line Graphs (DLG) files of buldings, roads, etc.
- ☑ Site Map
- ☐ Map or drawing depicting location of facility
- ☐ Safety Data Sheet (SDS)
- ☐ Emergency Response Plan
- ☐ Other: _____

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.

	6/01/2023
Authorized Signature	**Date**
David Vasbinder	Environmental Manager
Type or Printed Name of Signatory	**Title of Signatory**

*Responsible official as defined by 401 KAR 52:001.

Section AI.7: Notes, Comments, and Explanations

DEP FORM 7007B

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007B

Manufacturing or Processing Operations

___ Section B.1: Process Information
___ Section B.2: Materials and Fuel Information
___ Section B.3: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG.
___ Attach a flow diagram
___ Attach SDS

Source Name: **Republic Services of Kentucky, LLC d/b/a Epperson Waste Disposal, Inc.**
KY EIS (AFS) #: **21- 081-00018**
Permit #: **V-18-030**
Agency Interest (AI) ID: **1483**
Date: **6/1/2023**

Section B.1: Process Information

Emission Unit #	Emission Unit Name	Describe Emission Unit	Process ID	Process Name	Manufacturer	Model No.	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Is the Process Continuous or Batch?	Number of Batches per 24 Hours *(if applicable)*	Hours per Batch *(if applicable)*
004	MSW Landfill	Sanitary Landfilling of Municipal Solid Waste (MSW)	N/A	N/A	N/A	N/A	1968	Continuous		

Emission Unit #	Emission Unit Name	Describe Emission Unit	Process ID	Process Name	Manufacturer	Model No.	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Is the Process Continuous or Batch?	Number of Batches per 24 Hours *(if applicable)*	Hours per Batch *(if applicable)*

Section B.2: Materials and Fuel Information

**Maximum yearly fuel usage rate only applies if applicant request operating restrictions through federally enforceable limitations.*

Emission Unit #	Emission Unit Name	Name of Raw Materials Input	Maximum Quantity of Each Raw Material Input		Total Process Weight Rate for Emission Unit *(tons/hr)*	Name of Finished Materials	Maximum Quantity of Each Finished Material Output		Fuel Type	Maximum Hourly Fuel Usage Rate		Maximum Yearly Fuel Usage Rate		Sulfur Content *(%)*	Ash Content *(%)*
				(Specify Units/hr)				*(Specify Units/hr)*			*(Specify Units)*		*(Specify Units)*		
004	MSW Landfill	Waste	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		

Section B.3: Notes, Comments, and Explanations

DEP FORM 7007N

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007N

Source Emissions Profile

__ Section N.1: Emission Summary
__ Section N.2: Stack Information
__ Section N.3: Fugitive Information
__ Section N.4: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: Epperson Waste Disposal, Inc.
KY EIS (AFS) #: 21- 081-00018
Permit #: V-18-030
Agency Interest (AI) ID: 1483
Date: 5/15/2023

N.1: Emission Summary

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
See	Attachment	for	N1													

Section N.2: Stack Information

UTM Zone:

Stack ID	Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack	Stack Physical Data			Stack UTM Coordinates		Stack Gas Stream Data		
		Equivalent Diameter *(ft)*	Height *(ft)*	Base Elevation *(ft)*	Northing *(m)*	Easting *(m)*	Flowrate *(acfm)*	Temperature *(° F)*	Exit Velocity *(ft/sec)*
ST-001	Emissions Unit 004 (MSW Landfill) and Emissions Unit 001a (Flare)	0.83	26	875 msl			2131 cfm	1200 deg. F	< 60

Section N.3: Fugitive Information

UTM Zone:

Emission Unit #	Emission Unit Name	Process ID	Area Physical Data		Area UTM Coordinates		Area Release Data	
			Length of the X Side *(ft)*	Length of the Y Side *(ft)*	Northing *(m)*	Easting *(m)*	Release Temperature *(°F)*	Release Height *(ft)*
004	MSW Landfill	1						
003	Paved/unpaved haul roads	1 & 2						
005	Site Construction	1						
007	Final Cover Placement	1						

Section N.4: Notes, Comments, and Explanations

007 is a new unit which estimates fugitive dust emissions from haul roads due to the placement of approximately 215,000 cubic yards of soil final cover to permanently close the landfill. This activity is anticpated to take place during the next renewal permit term.

Attachment for KDEP Form 7007 N1

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
001a	Open Flare	1	LFG Combustion	N/A - flare IS a control device	N/A	ST-001	2,131 cfm***	NOx	37.42 lbs/mmscf	KDEP EIS	N/A	N/A	4.78	4.78	20.96	20.96
								CO	203.5 lbs/mmscf				26.02	26.02	113.97	113.97
								VOC	52.45 lbs/mmscf				6.71	0.13	29.37	0.59
								PM	4.58 lbs/mmscf				0.59	0.59	2.56	2.56
								SO_2	4.49 lbs/mmscf*	Site-Specific Tested Value			0.57	0.57	2.51	2.51
003	Paved and Unpaved Haul Roads	1	Unpaved Haul Roads	Dust Suppression (Water Truck)	WT - Water Truck	N/A - Fugitive	88,125 VMT	PM2.5	0.1372 lb/VMT	KDEP EIS	N/A	40.00%	N/A	N/A	6.045	3.627
								PM10	1.3716 lb/VMT						60.436	18.131
								PM	5.0809 lb/VMT			70.00%			223.877	67.163
		2	Paved Haul Roads				14,375 VMT	PM2.5	0.0744 lb/VMT			40.00%			0.535	0.321
								PM10	0.4464 lb/VMT						3.209	0.321
								PM	1.5165 lb/VMT			90.00%			10.900	1.090
004	MSW Landfill	1	Landfilling of MSW Waste	Open Flare	002	ST-001	11,888,684 yd^3	VOC	21.95 lbs/mmscf fugitive LFG**	KDEP EIS	80.00%	98.00%	3.64	0.73	6.38	3.19
005	Site Construction	1	Waste Processed	Dust Suppression (Water Truck)	WT - Water Truck	N/A - Fugitive	621,700 tons waste processed	PM2.5	.08235 lb/ton waste	KDEP EIS	N/A	40.00%	N/A	N/A	25.60	15.36
								PM10	.183 lb/ton waste			70.00%			56.89	17.07
								PM							56.89	17.07
007	Final Cover Placement****	1	Unpaved Haul Roads	Dust Suppression (Water Truck)	WT - Water Truck	N/A - Fugitive	12,534 VMT	PM2.5	0.1372 lb/VMT	Engineering Estimate	N/A	40.00%	N/A	N/A	0.860	0.516
								PM10	1.3716 lb/VMT			70.00%			8.596	2.579
								PM	5.0809 lb/VMT						31.814	9.544

*Updated based on the highest site-specific sulfur value measured since 2019.

**Fugitive LFG value 290.72 mmscf in 2023 used in the calculations, since it represents the maximum PTE for this inactive site.

***Flare emissions represent PTE based on design capacity. However, flows continue to decline at this inactive site each year, and actual gas flows in 2022 were only 1,069 cfm (approxiately half of the design capacity).

****See final cover placement calculations in application for assumptions on total quantities, distances traveled, type of haul truck used, etc.

DEP FORM 7007V

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007V

Applicable Requirements and Compliance Activities

___ Section V.1: Emission and Operating Limitation(s)
___ Section V.2: Monitoring Requirements
___ Section V.3: Recordkeeping Requirements
___ Section V.4: Reporting Requirements
___ Section V.5: Testing Requirements
___ Section V.6: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: **Republic Services of Kentucky, LLC d/b/a Epperson Waste Disposal, Inc.**
KY EIS (AFS) #: **21- 081-00018**
Permit #: **V-18-030**
Agency Interest (AI) ID: **1483**
Date: **6/1/2023**

Section V.1: Emission and Operating Limitation(s)

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
001a	Open Flare	401 KAR 63:015	Opacity	Visual emissions shall not exceed 20% opacity for >3 minutes during any one day			Visual observations
001a	Open Flare	40 CFR 62 Subpart OOO & 40 CFR 60.18; 40 CFR 63 Subpart AAAA & 40 CFR 63.11	Visual Emissions	VE < 5 minutes in 2 hours			Visual observations
004	Landfill	40 CFR 63 Subpart AAAA	NMOC	Multiple Requirements			Wellhead readings and surface monitoring
Insignificant	Leachate Tanks	40 CFR 60 Subpart Kb	VOC	Vapor pressure <3.5 kPA			Leachate is mostly water; negligible vapor pressure
003	Haul Roads	401 KAR 63:010	Fugitive Dust	No fugitive VE past property line			Daily visual observations when site is open
005	Site Construction	401 KAR 63:010	Fugitive Dust	Prevent airborne PM			Daily visual observations when site is open
007	Final Cover Placement	401 KAR 63:010	Fugitive Dust	No fugitive VE past property line			Daily visual observations when site is open

Section V.2: Monitoring Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Monitored	Description of Monitoring
001a	Open Flare	Visual Emissions	401 KAR 63:015	Visual Emissions	Weekly VE observations
001a	Open Flare	N/A	40 CFR 63 Subpart AAAA	Flow and Flame Presence	Measure flow and flame presence continuously
004	MSW Landfill	NMOC	40 CFR 63 Subpart AAAA	NMOC	Wellhead readings monthly, cover integrity monitoring monthly, and quarterly surface emissions monitoring
003 & 005	Paved & Unpaved Haul Roads, Site Construction	Fugitive PM	401 KAR 63:010	Fugitive Dust	Daily visual observations when site is actively accepting refuse
007	Final Cover Placement	Fugitive PM	401 KAR 63:010	Fugitive Dust	Daily visual observations when final cover is being placed

Section V.3: Recordkeeping Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Recorded	Description of Recordkeeping
001a	Open Flare	Visual Emissions	401 KAR 63:015	Visual Emissions	Keep records of weekly VE observations
001a	Open Flare	N/A	40 CFR 63 Subpart AAAA	Flow and Flame Presence	Record flow and flame presence every 15 minutes
004	MSW Landfill	NMOC	40 CFR 63 Subpart AAAA	NMOC	Wellhead readings and surface monitoring (electronic)
003 & 005	Paved & Unpaved Haul Roads, Site Construction	Fugitive PM	401 KAR 63:010	Fugitive Dust	Keep records of daily fugitive dust observations
007	Final Cover Placement	Fugitive PM	401 KAR 63:010	Fugitive Dust	Keep records of daily fugitive dust observations

Section V.4: Reporting Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Reported	Description of Reporting
001a	Open Flare	Visual Emissions	401 KAR 63:015	Visual Emissions	Semiannual Title 5 Operating Report
001a	Open Flare	N/A	40 CFR 63 Subpart AAAA	Flow and Flame Presence	Semiannual Title 5 Operating Report & Semiannual NESHAP Report
004	MSW Landfill	NMOC	40 CFR 63 Subpart AAAA	NMOC	Semiannual Title 5 Operating Report & Semiannual NESHAP Report
003 & 005	Paved & Unpaved Haul Roads, Site Construction	Fugitive PM	401 KAR 63:010	Fugitive Dust	Semiannual Title 5 Operating Report
007	Final Cover Placement	Fugitive PM	401 KAR 63:010	Fugitive Dust	Will need to be added to semiannual Title 5 Operating Report
ALL	ALL	ALL	401 KAR 52:020	ALL	Annual Emissions Report

Section V.5: Testing Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Tested	Description of Testing
001a	Open Flare	NMOC	40 CFR 60.18 & 40 CFR 63.11	VE, Exit Velocity, Net Heating Value	One-tine initial performance test using EPA Method 22, a calibrated flow meter, and, EPA Method 3
004	MSW Landfill	Sulfur	401 KAR 50:045	Sulfur	Collect annual sulfur sample for lab analysis. Conduct stain tube analysis quarterly for sulfur content

Section V.6: Notes, Comments, and Explanations

DEP FORM 7007CC

Division for Air Quality

Submit to the Regional Office identified in your permit

DEP7007CC

Compliance Certification

____ Section CC.1: Source Information

____ Section CC.2: Signature Block

____ Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

____ Section CC.4: Notes, Comments, and Explanations

Section CC.1: Source Information

1) Source Name	2) Agency Interest (AI) ID
Republic Services of KY, LLC - Epperson Landfill	1483

3) Source Location Address (street, city, state, zip)

2360 Cynthiana Road, Williamstown, KY 41097

4) Technical Contact (name, e-mail, phone #)

David Vasbinder, Dvasbinder@republicservices.com, (314) 249-9404

5) Permit Number(s)	6) County	7) KY EIS (AFS) #
V-18-030	Grant	21- 081-00018

8) Submittal Information

Are you certifying any requirement(s) as "not in continuous compliance?" ☐ Yes ☑ No **What is the reporting period?** ____ mm/ ____ dd/ ____ yy **TO** ____ mm/ ____ dd/ ____ yy

TV Renewal

Section CC.2: Signature Block

9) CERTIFICATION SIGNATURE

I, THE UNDERSIGNED, HEREBY CERTIFY UNDER PENALTY OF LAW, THAT I AM A RESPONSIBLE OFFICIAL, AND THAT I HAVE PERSONALLY EXAMINED, AND AM FAMILIAR WITH, THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ITS ATTACHMENTS. BASED ON MY INQUIRY OF THOSE INDIVIDUALS WITH PRIMARY RESPONSIBILITY FOR OBTAINING THE INFORMATION, I CERTIFY THAT THE STATEMENTS AND INFORMATION IS ON KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE OR INCOMPLETE INFORMATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT.

BY:  AUTHORIZED SIGNATURE

06/01/2023 DATE

David Vasbinder TYPED OR PRINTED NAME OF SIGNATORY

Environmental Manager TITLE OF SIGNATORY

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units in Continuous Compliance

10a) Emission Units in Continuous Compliance. *The following emission units were in continuous compliance with each permit term or condition(s) and applicable requirements listed here, such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below. If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
004	Section B, Condition 1.a.A. - B., 1.d, 1.h-j (Operating Limitations/Compliance Demonstration), 40 CFR 60.752(b), 60.755(b) & 60.759(a) & (b)	Municipal Solid Waste (MSW) Landfill	Design gas system to meet NSPS criteria; install wells in areas requiring control; calculate max gas flow rate	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
004	Section B, Condition 1.a.C &D, 1.e, 1.f, 3.a & b., 4.a & c .i - iii, 5.e (Op Limit/Comp Demon., Testing, Monitoring Reqmts, Records), 40 CFR 60.753, 60.755 & 60.758	Landfill Gas Collection System	Monitor all wells monthly for pressure, O2 or N2, temp. w/allowable methods. Correct exceedances	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
001a	Section B, Condition 1.b.i & c (Operating Limitations), 40 CFR 60.752(b), 60.753, 60.755 & 60.756	Landfill Gas Open Flare and Gas Collection System	Control collected gas w/ open flare, encl. comb. or treat. syst. Operate in accordance w/NSPS	Reported annually in emissions report	N/A - Title 5 Air Operating Permit Renewal Application
001a	Section B, 1.g, 7.a, b, e & h (Operating Limits/Control Equipment), 40 CFR 60.753(e) & (f) & 60.755(e)	Landfill Gas Open Flare	NSPS applies at all times except during SSM events. Operate with flame present; close valves within 1 hour if flare inoperable	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
004	Section B, Condition 1.k (Operating Limitations), 40 CFR 61.154	Municipal Solid Waste (MSW) Landfill	Cover asbestos waste w/6 in. non-asbestos material by end of working day	None	N/A - Title 5 Air Operating Permit Renewal Application
004	Section B, Condition 1.l & 5.j (Operating Limitations, recordkeeping), 40 CFR 63.6, 63.1960	Municipal Solid Waste (MSW) Landfill	Develop a written Startup, Shutdown and Malfunction Plan; maintain on site.	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units in Continuous Compliance

10a) Emission Units in Continuous Compliance. *The following emission units were in continuous compliance with each permit term or condition(s) and applicable requirements listed here, such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below. If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
004	Section B, Condition 1.m (Operating Limitations), 40 CFR 60 Subpart XXX	Municipal Solid Waste (MSW) Landfill	Obtain air permit incorporating Subpart XXX requirements if site expands landfill	N/A	N/A - Title 5 Air Operating Permit Renewal Application
004	Section B, Condition 2.a, 3.e & f, 4.d (Emissions Limits, Testing, Monitoring Reqmts), 40 CFR 60.753(d), 60.755(c)	Municipal Solid Waste (MSW) Landfill	Surface CH4 ems < 500 ppm except during SSM events. Monitor quarterly, follow Method 21 procedures	<500 ppm	N/A - Title 5 Air Operating Permit Renewal Application
001a	Section B, Condition 2.b & 3.g (Emissions Limits, Testing), 40 CFR 60 Subpart WWW, 40 CFR 60.18	Landfill Gas Open Flare	No VE except for 5 minutes in 2 hours	None observed during Initial NSPS Performance Test	N/A - Title 5 Air Operating Permit Renewal Application
001a	Section B, Condition 2.c, 4.f & 5.l (Emissions Limits, Monitoring & Recordkeeping), 401 KAR 63:015 Section 3	Landfill Gas Open Flare	Flare PM < 20% opacity except for 3 minutes/day; Weekly VE Survey; Method 9 if VE detected > limits	None observed	N/A - Title 5 Air Operating Permit Renewal Application
N/A	Section B, Condition 1.b.ii-iii, 3.c, 7.d (Operational Limits, Testing, Control Equipment), 40 CFR 60.752(b)(2)(iii)(b) & (c)	LFG Enclosed Combustor & Treatment Systems or Other Control Equipment	Control System D.E. 98% or NMOC Outlet Concentration < 20 ppm as hexane, 3% O2, or Other	N/A	N/A - Title 5 Air Operating Permit Renewal Application
001a	Section B, Condition 3.d, h & 7.f (Testing, Control Equip.), 40 CFR 60 Subpart WWW, 40 CFR 60.18	Landfill Gas Open Flare	Calculate net heating value of gas using Method 3C, three samples over 1/2 hour	N/A - net heating value was greater than required minimum value	N/A - Title 5 Air Operating Permit Renewal Application

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units in Continuous Compliance

10a) Emission Units in Continuous Compliance. *The following emission units were in continuous compliance with each permit term or condition(s) and applicable requirements listed here, such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below. If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
001a	Section B, Condition 3.i, j & 7.f (Testing, Control Equip.), 40 CFR 60 Subpart WWW, 40 CFR 60.18	Landfill Gas Open Flare	Calculate exit velocity; maximum cannot exceed limits of 40 CFR 60.18	N/A - exit velocity met 60.18 requirements	N/A - Title 5 Air Operating Permit Renewal Application
004	Section B, Condition 3.k, 6.k & 6.l (Testing & Reporting), 401 KAR 50:045	Municipal Solid Waste (MSW) Landfill	Sample for H2S quarterly with stain tubes & annual with analytical samples (3) - Submit results	N/A	N/A - Title 5 Air Operating Permit Renewal Application
004	Section B, Condition 3.l (Testing)	Municipal Solid Waste (MSW) Landfill	Notify appropriate field agency 5 days prior to performing a surface scan.	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
All	Section B, Condition 3.m (Testing)	All	Conduct Performance Testing required by Division using reference methods in 401 KAR 50:015.	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
004	Section B, Condition 4.b (Monitoring), 40 CFR 60.755(c)(5)	Municipal Solid Waste (MSW) Landfill	Conduct monthly cover integrity monitoring & implement repairs as needed	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
004	Section B, Condition 4.e & 5.k (Monitoring & Recordkeeping)	Municipal Solid Waste (MSW) Landfill	Measure liquid levels quarterly in all gas wells; maintain records & calculations as specified in permit	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units in Continuous Compliance

10a) Emission Units in Continuous Compliance. *The following emission units were in continuous compliance with each permit term or condition(s) and applicable requirements listed here, such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below. If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
004	Section B, Condition 5.a. & b.i (Specific Recordkeeping Requirements), 40 CFR 60.758(a) & (b)	Municipal Solid Waste (MSW) Landfill	Maintain design capacity, solid waste, well density, performance test, control specifications	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
001a	Section B, Conditions 5.b.ii, c.ii, 7.c.i, 7.i (Recordkeeping, Control Equip), 40 CFR 60.758(b)(4), 60.756(b) & (c)	Landfill Gas Open Flare	Use heat sensing device to detect flame, keep records of flame presence	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
001a	Section B, Condition 5.b.ii, c.i, 7.c.ii (Recordkeeping, Control Equip), 40 CFR 60.758(b)(4), 60.756(b) & (c)	Landfill Gas Open Flare	Install & maintain gas flow device recording flow to control device every 15 minutes; keep records of flow	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
004	Section B, Condition 5.d (Recordkeeping), 40 CFR 60.758(d)	Municipal Solid Waste (MSW) Landfill	Keep as-built map of existing and future gas system.	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
004	Section B, Condition 5.f - h (Recordkeeping), 40 CFR 61.154 & 61.151	Municipal Solid Waste (MSW) Landfill	Maintain WSR for asbestos receipts & map of disposal areas. Comply w/61.151 upon site closure.	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
004	Section B, Condition 6.a - c (Reporting), 40 CFR 60.756(e),60.757(a), (b) & (c)	Municipal Solid Waste (MSW) Landfill	Submit Initial Design Capacity, NMOC Reports, alt. op. procedures for systems not meeting 60.759	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units in Continuous Compliance

10a) Emission Units in Continuous Compliance. *The following emission units were in continuous compliance with each permit term or condition(s) and applicable requirements listed here, such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below. If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
004	Section B, Condition 6.e & j (Reporting), 40 CFR 60.757(f), 40 CFR 63.1980 & 63.10(d)	Municipal Solid Waste (MSW) Landfill	Submit semiannual NSPS, SSM reports & SSM non-procedures	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
004	Section B, Condition 5.j.i.2 & 3 (Specific Recordkeeping Requirements), 40 CFR 63.10(d) & 63.1965	Municipal Solid Waste (MSW) Landfill	Deviation if more than one 15 minute data point is missing per hour, or if SSM plan not followed.	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
001a	Section B, Condition 6.f (Reporting), 40 CFR 60.8 & 60.757(g)	Landfill Gas Open Flare	Within 180 days of startup conduct/submit performance test. Include items in test report.	Within required 60.18 limits	N/A - Title 5 Air Operating Permit Renewal Application
004	Section B, Condition 6.g & i (Reporting), 40 CFR 61.154	Municipal Solid Waste (MSW) Landfill	Notify agency of improperly enclosed asbestos, discrepancies; 45 day disturbance.	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
001a	Section B, Condition 7.g (Control Equipment), 40 CFR 60.18(d)	Landfill Gas Open Flare	Monitor flare in accordance with 40 CFR 60 Subpart WWW	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
003 & 005	Section B, Condition 1.a & b (Operating Limitations), 401 KAR 63:010	Paved and Unpaved Haul Roads & Site Construction/Operation	Take reasonable precautions to prevent fugitive PM from becoming airborne.	None	N/A - Title 5 Air Operating Permit Renewal Application

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units in Continuous Compliance

10a) Emission Units in Continuous Compliance. *The following emission units were in continuous compliance with each permit term or condition(s) and applicable requirements listed here, such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below. If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
003 & 005	Section B, Conditions 2 & 4 (Emissions Limitations, Testing Requirements), 401 KAR 63:010	Paved and Unpaved Haul Roads & Site Construction/Operation	No VE leaving property. Perform VE for dust daily when site is operating	None	N/A - Title 5 Air Operating Permit Renewal Application
003 & 005	Section B, Condition 3 (Testing Requirements), 401 KAR 50:045	Paved and Unpaved Haul Roads & Site Construction/Operation	Conduct performance testing as required by KDEP	None	N/A - Title 5 Air Operating Permit Renewal Application
003 & 005	Section B, Condition 5 (Specific Recordkeeping Requirements), 401 KAR 52:020	Paved and Unpaved Haul Roads & Site Construction/Operation	Maintain log when dust supression equipment is used; maintain records of VE inspections of lot line.	None	N/A - Title 5 Air Operating Permit Renewal Application
003 & 005	Section B, Condition 7 (Specific Recordkeeping Requirements), 401 KAR 52:020	Paved and Unpaved Haul Roads & Site Construction/Operation	Keep appropriate equipment for dust supression on site and in working order.	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
006	Section B, Conditions 1 - 6, 40 CFR 63.11124	Gasoline Storage Tank	Comply with 40 CFR 63 Subpart CCCCCC	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
ALL	Section D, Source Emission Limitations and Testing Requirements	ALL	Compliance is based on emissions and processing rates for 12 consecutive months	Emissions will be submitted in the annual inventory.	N/A - Title 5 Air Operating Permit Renewal Application

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units in Continuous Compliance

10a) Emission Units in Continuous Compliance. *The following emission units were in continuous compliance with each permit term or condition(s) and applicable requirements listed here, such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below. If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
All	Section E - Source Control Equipment Requirements	All emission units	Maintain affected facility & pollution control equipment to minimize emissions	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
General	Section F, Conditions 1-4, 7 & 8, KAR 52:020	All emission units	Recordkeeping, agency inspection requirements & emissions exceedance notifications	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
General	Section F, Conditions 5 & 6, KAR 52:020	All emission units	Submission of semi-annual and annual reports	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
General	Section F, Condition 9, KAR 52:020	All emission units	Submission of Annual Compliance Certification	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
General	Section F, Condition 10, 401 KAR 52:020	All emission units	Submit annual emission report	As indicated on the annual report	N/A - Title 5 Air Operating Permit Renewal Application
General	Section G, Multiple requirements	All emission units	General Reqmnt's for permit mods, reopening, renewal, source testing, ozone & risk management regs	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
004	Updates to Landfill NESHAP (40 CFR 63 Subpart AAAA) effective 927/21	Municipal Solid Waste (MSW) Landfill	Multiple - permit will be updated during next renewal cycle.	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application
004	Landfill Federal Plan (40 CFR 62 Subpart OOO) effective 6/21/21	Municipal Solid Waste (MSW) Landfill	Multiple - permit will be updated during next renewal cycle.	Not Applicable	N/A - Title 5 Air Operating Permit Renewal Application

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units Subject to Future Compliance Dates

10b) Emission Units Subject to Future Compliance Dates. *The following emission units will achieve compliance on a timely basis and maintain compliance with future compliance dates as they become applicable during the permit term. If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID#	Future Compliance Schedule	Emission Unit Description	Reason for Future Compliance Date
004	Section B, Condition 6.d (Reporting), 40 CFR 60.757: Submit closure report within 30 days of waste cessation	Municipal Solid Waste (MSW) Landfill	This condition only becomes applicable upon closure of the landfill, which did not occur during the reporting time frame although waste acceptance was temporarily halted in December 2019. **THE CONDITION CITATION SHOULD BE CHANGED TO REFLECT APPLICABILITY OF FEDERAL PLAN INSTEAD OF WWW NSPS.**
004	Section B, Condition 6.h (Reporting), 40 CFR 61.154: submit copy of records of asbestos disposal location to Agency upon closure of landfill	Municipal Solid Waste (MSW) Landfill	This condition only becomes applicable upon closure of the landfill, which did not occur during the reporting time frame although waste acceptance was temporarily halted in December 2019.
004	Section H, Alternate Operating Scenario 1, 40 CFR 60.757: Submit equipment removal report once NMOC < 50 Mg/year	Municipal Solid Waste (MSW) Landfill	This condition only becomes applicable upon closure of the landfill, and demonstration that NMOC emissions have been reduced to less than 50 Mg/year through specified testing. Note: The Federal Plan (40 CFR 62 Subpart OOO) which became applicable to the facility on 6/21/2021 has a lower threshold of 34 mg/year NMOC to remove controls permanently. **THE CONDITION CITATION SHOULD BE CHANGED TO REFLECT APPLICABILITY OF FEDERAL PLAN INSTEAD OF WWW NSPS.**

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units Not in Continuous Compliance

10c)(1) Emission Units Not in Continuous Compliance. *The following emission units were not in continuous compliance with each permit term or condition and applicable requirements listed here, such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below. If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or Requirement	Actual Emissions or Status of Requirement	The method used for determining compliance over the reporting period, and whether compliance was continuous or intermittent. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
N/A					This form is being submitted to complete the facility's air operating permit renewal application (Title 5)

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units Not in Continuous Compliance (continued)

10c)(2) Emission Units Not in Continuous Compliance. *For the emission units and requirements listed in 10c)(1) that were not in continuous compliance since the last reporting period, state the duration, magnitude, and reason or reasons for non-compliance. Each row of 10c)(2) must relate to the corresponding row of 10c)(1). If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID#	Description of duration, magnitude, and reason(s) for non-compliance and corrective steps taken or planned.
N/A	This form is being submitted to complete the facility's air operating permit renewal application (Title 5)

DEP FORM 7007DD

Division for Air Quality
300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007DD

Insignificant Activities

___ Section DD.1: Table of Insignificant Activities
___ Section DD.2: Signature Block
___ Section DD.3: Notes, Comments, and Explanations

Source Name: **Republic Services of Kentucky, LLC d/b/a Epperson Waste Disposal, Inc.**

KY EIS (AFS) #: **21- 081-00018**

Permit #: **V-18-030**

Agency Interest (AI) ID: **1483**

Date: **6/1/2023**

Section DD.1: Table of Insignificant Activities

*Identify each activity with a unique Insignificant Activity number (IA #); for example: 1, 2, 3… etc.

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
1	Five (5) 30,000 gallon above ground leachate storage tanks		None	
2	One (1) 261, 750 gallon above ground leachate storage tank		None	
3	Two (2) 8,000 gallons Diesel Tanks		None	
4	One (1) 422 gallon diesel tank		None	
5	One (1) parts cleaner station		None	

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
6	One (1) 1000 gallon propane tank		None	
7	One (1) 500 gallon propane tank		None	
8	One (1) 20 gallon propane tank		None	

Section DD.2: Signature Block

I, THE UNDERSIGNED, HEREBY CERTIFY UNDER PENALTY OF LAW, THAT I AM A RESPONSIBLE OFFICIAL, AND THAT I HAVE PERSONALLY EXAMINED, AND AM FAMILIAR WITH, THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ITS ATTACHMENTS. BASED ON MY INQUIRY OF THOSE INDIVIDUALS WITH PRIMARY RESPONSIBILITY FOR OBTAINING THE INFORMATION, I CERTIFY THAT THE INFORMATION IS ON KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE OR INCOMPLETE INFORMATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT.

Authorized Signature

06/01/2023

Date

By:

David Vasbinder

Type/Print Name of Siguatory

Environmental Manager

Title of Siguatory

Section DD.3: Notes, Comments, and Explanations

DEP FORM 7007GG

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007GG

Control Equipment

Additional Documentation

___ Complete Sections GG.1 through GG.12, as applicable

___ Attach manufacturer's specifications for each control device

___ Complete DEP7007AI

Source Name: Republic Services of Kentucky, LLC d/b/a Epperson Waste Disposal, Inc.

KY EIS (AFS) #: 21- 081-00018

Permit #: V-18-030

Agency Interest (AI) ID: 1483

Date: 6/1/2023

Section GG.1: General Information - Control Equipment

Control Device ID #	Control Device Name	Cost	Manufacturer	Model Name/ Serial #	Date Installed	Inlet Gas Stream Data For All Control Devices					Inlet Gas Stream Data For Condensers, Adsorbers, Afterburners, Incinerators, Oxidizers Only			Equipment Operational Data For All Control Devices		
						Temperature (°F)	Flowrate (scfm @ 68°F)	Average Particle Diameter (μm)	Particle Density (lb/ft^3) or Specific Gravity	Gas Density (lb/ft^3)	Gas Moisture Content (%)	Gas Composition	Fan Type	Pressure Drop Range (in. H_2O)	Pollutants Collected/ Controlled	Pollutant Removal (%)
001a	Open Flare		LFG Specialties	CF103418	Nov-16	1200	2131	N/A	N/A	0.0744				1 - 10 in. H_2O	NMOC, CH4	98%

Section GG.2: Flare Source Information

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Flare	Type of Flare (e.g. steam-assisted, air-assisted, nonassisted)	Process Gas Flowrate *(acfm)*	Net Heating Value of Stream(s) (Btu/scf)	Removal Efficiency *(%)*	Flare Rated Capacity *(MMBtu/hr)*
004	Emissions Unit 004 -MSW Landfill	Non-assisted	2131 scfm	Between 450 - 550 BTU/scf	98% (Methane, NMOC)	64.7

Section GG.3: Cyclone

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Cyclone	Identify Number of Cyclones: Single or Multiple	Identify Type: High-Efficiency, Conventional, or High-Throughput	Inlet Height *(ft)*	Inlet Width *(ft)*	Bottom Cone Height *(ft)*	Body Height *(ft)*	Body Diameter *(ft)*	Dust Outlet Tube Diameter *(ft)*	Gas Outlet Tube Diameter *(ft)*	Vortex Finder Height *(ft)*

Section GG.4: Electrostatic Precipitator (ESP)

Control Device ID #	Identify all Emission Units and Control Devices that Feed to ESP	Identify Type: Dry negative corona, Wet negative corona or Wet positive corona	Number of Stages	Number of Plates per Stage	Plate Spacing *(in)*	ESP Total Width *(ft)*	ESP Total Height *(ft)*	Collection Plate Height *(ft)*	Length of Collection Plate *(ft)*	Particle Migration (Drift) Velocity *(specify units)*	Particle Resistivity *(specify units)*	Primary and Secondary Voltage Across Plates *(volts)*	Primary and Secondary Current *(amperes)*

Section GG.5: Scrubber

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Scrubber	Identify Type of Scrubber: Venturi, Packed Bed, Spray Tower, or Other (specify)	For Venturi Scrubbers:	For Packed Bed Scrubbers:		For Spray Towers:		Identify Type of Flow: Concurrent, Countercurrent, or Crossflow	Length in Direction of Gas Flow *(ft)*	Cross-Sectional Area *(ft^2)*	Venturi Throat Velocity *(ft/s)*	Mist Eliminator			Scrubbing Liquid			
			Identify Throat Type: Fixed or Adjustable	Identify Packing Type	Packing Height *(in)*	Number of Nozzles	Nozzle Pressure *(psig)*					Identify Type: Mesh or Vane	Cross-Sectional Area *(ft^2)*	Pressure Drop *(in. H_2O)*	Chemical Composition	Flowrate *(gal/min)*	Fresh Liquid Makeup Rate *(gal/min)*	Describe Disposal Method of Scrubber Effluent

Section GG.6: Filter

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Filter	Identify Type of Filter Unit: Baghouse, Cartridge Collector, or Other (specify)	Identify Type of Filtering Material: Fabric, Paper, Synthetic, or Other (specify)	Total Filter Area *(ft^2)*	Effective Air-to-Filter Ratio *($acfm/ft^2$)*	Continuous Monitoring Instrumentation (e.g. COMS, BLDS, none)	Additional Materials Introduced into the Control System (e.g. lime, carbon)		Identify Cleaning Method: Shaker, Pulse Air, Reverse Air, Pulse Jet, or Other (specify)	Identify Gas Cooling Method: Ductwork, Heat Exchanger, Bleed-in Air, Water Spray, or Other (specify)	For Ductwork:		For Bleed-in Air:	For Water Spray:
							Material	Injection Rate *(lb/hr)*			Length *(ft)*	Diameter *(ft)*	Flowrate *(scfm @ 68°F)*	Flowrate *(gal/min)*

Section GG.7: Afterburner/Incinerator/Oxidizer

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Afterburner/Incinerator/ Oxidizer	Identify Type: Afterburner, Incinerator, Oxidizer, or Other (specify)	Number of Burners	Burner Rating *(BTU/hr)*	Dimensions of Combustion Chamber *(specify units)*	Residence Time *(sec)*	Combustion Chamber Temperature *(°F)*	Type of Catalyst (if applicable)	Type of Heat Exchanger (if applicable)	Auxiliary Fuel							Composition and Quantities of Combusted Waste
										Identify Fuel Type	Higher Heating Value *(MMBtu/scf)*	Hourly Fuel Usage *(scf/hr)*	% Sulfur (Maximum)	% Sulfur (Average)	% Ash (Maximum)	% Ash (Average)	

Section GG.8: Adsorber

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Adsorber	Identify Adsorbate	Identify Adsorbent: Activated carbon, Activated alumina, Silica Gel, Synthetic Polymers, Zeolite, or Other (specify)	Dimensions of Each Bed				Type of Regeneration: Replacement, Steam, or Other (specify)	Regeneration Time *(minutes)*	Method of Regeneration: Alternate Use of Beds, Source Shutdown, or Other (specify)	Time On-line Before Regeneration *(minutes)*
				Thickness in Direction of Gas Flow *(in)*	Cross-Sectional Area *(in^2)*	Weight of Adsorbent per Bed *(lb)*	Number of Beds				

Section GG.9: Condenser

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Condenser	Identify Type of Condenser: Spray Tower, Jet Ejector, Barometric, Single-Pass Shell-and-Tube, or Multi-Pass Shell-and-Tube (if multi-pass, indicate number of passes)	Identify Type of Coolant: Water, Brine, Liquid Nitrogen, CFC/HFC, or Other (specify)	Coolant Temperature		Coolant Liquid Flowrate *(gpm)*	Coolant Gas Flowrate *(scfm @ 68 ° F)*	Condensing Surface Area *(specify units)*	Outlet Gas Temperature *(° F)*	Outlet Gas Composition
				Inlet *(° F)*	Outlet *(° F)*					

Section GG.10: Selective Catalytic Reduction (SCR) / Selective Non-catalytic Reduction (SNCR)

Control Device ID #	Identify all Emission Units and Control Devices that Feed to SCR/SNCR	Type (SCR/SNCR)	Gas Composition	Injection Grid Design (e.g. honeycomb)	Design Temperature Range		Reagent			Maximum Design Ammonia Slip *(ppm)*	SCR Only			
											Catalyst			
					Min *(°F)*	Max *(°F)*	Type	Injection Rate			Composition	Volume *(ft^3)*	Weight *(lb)*	Replacement Schedule
								Min *(lb/hr)*	Max *(lb/hr)*					

Section GG.11: Other Control Equipment

Control Device ID #	**Identify all Emission Units and Control Devices that Feed to Control Equipment**	**Type of Control Equipment** (provide description and a diagram with dimensions)

Section GG.12: Notes, Comments, and Explanations

DEP FORM 7007HH

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007HH

Haul Roads

_____ Section HH.1: Haul Roads
_____ Section HH.2: Yard Area
_____ Section HH.3: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI, DEP7007N and DEP7007V

___ SDS for dust suppressant

Source Name: **Republic Services of Kentucky, LLC d/b/a Epperson Waste Disposal, Inc.**

KY EIS (AFS) #: **21-** **081-00018**

Permit #: **V-18-030**

Agency Interest (AI) ID: **1483**

Date: **6/1/2023**

Section HH.1: Haul Roads

HH.1A Unpaved Haul Roads:

Average Number of Days in a Year with 0.01 inches of Precipitation (P): 130 Days

Mean Vehicle Weight (W): 23 Tons

Surface Material Silt Content (s): 6.4 %

Haul Road Length: 2.8 Miles

Maximum Vehicle Miles Traveled in a Year: 88,125 Miles

Describe the dust control method for unpaved haul road(s):
(If dust control suppressants will be utilized, attach the approved Safety Data Sheet(s), as applicable.)

The site utilizes a water truck to control emissions on haul roads.

Emission factor: Multiple (PM, PM10 & PM2.5) - see 7007 N1 Attachment

HH.1B Paved Haul Roads:

Average Number of Days in a Year with 0.01 inches of Precipitation (P): 130 Days

Mean Vehicle Weight (W): 23 Tons

Road Surface Silt Loading (sL): 7.4 (G/M^2)

Haul Road Length: 0.46 Miles

Maximum Vehicle Miles Traveled in a Year: 14,375 Miles

Describe the dust control method for paved haul road(s):
(If dust control suppressants will be utilized, attach the approved Safety Data Sheet(s), as applicable.)

The site utilizes a water truck to control emissions on haul roads.

Section HH.2: Yard Area (Aggregate Handling And Storage Piles):

Average Number of Days in a Year with 0.01 inches of Precipitation (P): Days

Mean Wind Speed (U): MPH

Material Moisture Content (M): %

Describe the dust control method for yard area:
(If dust control suppressants will be utilized, attach the approved Safety Data Sheet(s), as applicable.)

Section HH.3: Notes, Comments, and Explanations

LIST OF NON-APPLICABLE REQUIREMENTS

In Section 4 of DEP Form AI (Other Required Information), a space is provided for the applicant to provide the KDEP with a list of non-applicable requirements on a separate attachment, for which the applicant is requesting permit shield coverage. The list below summarizes the requirements which the applicant has identified as non-applicable:

State Regulations Not Applicable to the Epperson Waste Disposal Landfill

Per a review of the Kentucky Administrative Regulations for Air Quality, the following state regulations were deemed to be not applicable:

Emission Unit ID No., or activity to which requirement does not apply	Citation	Brief description of requirement	Why the requirement does not apply
All Activities	401 KAR 50:020	Air Quality Control Regions	Not Applicable
All Activities	401 KAR 50:066	Conformity of transportation plans, programs and projects	Not Applicable
All Activities	401 KAR 51:052	Review of new sources in nonattainment areas	Grant County is in attainment for all criteria pollutants
All Activities	401 KAR 51:150	NOx requirements for stationary internal combustion engines	No emissions unit of this type are at the facility
All Activities	401 KAR 51:160	NOx requirements for large utility and industrial boilers	No emissions unit of this type are at the facility
All Activities	401 KAR 51:170	NOx requirements for cement kilns	No emissions unit of this type are at the facility
All Activities	401 KAR 51:180	NOx credits for early reduction and emergency	Source not subject to NOx SIP Call
All Activities	401 KAR 51:190	Banking and trading NOx Allowances	Source not subject to NOx SIP Call
All Activities	401 KAR 51:195	NOx Opt-In Provisions	Source not subject to NOx Trading Budget program
All Activities	401 KAR 51:210	CAIR NOx Annual Trading Program	No emissions unit of this type are at the facility
All Activities	401 KAR 51:220	CAIR NOx Ozone Season Trading Program	No emissions unit of this type are at the facility
	401 KAR 51:230	CAIR SO2 Ozone Season	No emissions unit of this

Emission Unit ID No., or activity to which requirement does <u>not</u> apply	**Citation**	**Brief description of requirement**	**Why the requirement does not apply**
All Activities		Trading Program	type are at the facility
All Activities	401 KAR 52:030	Federally enforceable permits for non-major sources	Source is not eligible for this permit since it is required to obtain a Title 5 operating permit.
All Activities	401 KAR 52:040	State-origin permits	Source is not eligible for this permit since it is required to obtain a Title 5 operating permit.
All Activities	401 KAR 52:060	Acid Rain Permits	Source is not subject to acid rain permitting.
All Activities	401 KAR 52:070	Registration of designated sources	Source is not eligible for a registration since it is required to obtain a Title 5 operating permit.
All Activities	401 KAR 52:090	Prohibitory rule for hot mix asphalt plants	No emissions unit of this type are at the facility
All Activities	401 KAR 58:005	Accreditation of Asbestos Professionals	Facility does not conduct asbestos abatement operations.
All Activities	401 KAR 58:010	Local Education Agencies	Regulation only applies to local education agencies
All Activities	401 KAR 58:040	Requirements for Asbestos Abatement Entities	Facility does not conduct asbestos abatement operations.
All Activities	401 KAR 59:001 – 760	New Source Standards	Different source category
All Activities	401 KAR 61:001 – 175	Existing Source Standards	Different source category
All Activities	401 KAR 63:025	Asphalt Paving Operations	No emissions unit of this type are at the facility
All Activities	401 KAR 63:031	Leaks from Gasoline Tank Trucks	No emissions unit of this type are at the facility
All Activities	401 KAR 65	Mobile Source Related Emissions	Stationary Source
All Activities	401 KAR 68	Chemical Accident Prevention	Source does not store chemicals in quantities which trigger the applicability of 40 CFR Part 68

Federal Regulations Not Applicable to the Epperson Waste Disposal Landfill

Per a review of the Code of Federal Regulations, the following federal regulations were deemed to be not applicable:

Unit Ref. No., or activity to which requirement does not apply	Citation	Brief description of requirement	Why the requirement does not apply
All Activities	40 CFR 53	Ambient Air Reference & Equivalent Methods	Part 53 imposes no emissions limits
All Activities	40 CFR 54	Prior notice of citizen suits	Part 54 imposes no emissions limits
All Activities	40 CFR 55	Outer Continental Shelf Regulations	Not subject to OCS regulations
All Activities	40 CFR 56	Regional Consistency	Part 56 imposes no emissions limits
All Activities	40 CFR 57	Primary Nonferrous Smelters	Not a nonferrous smelter
All Activities	40 CFR 58	Ambient Air Quality Surveillance	Part 58 imposes no emissions limits
All Activities	40 CFR 59	National Volatile Organic Compound Emission Standards for Consumer and Commercial Products	No applicable source categories or processes
All Activities	40 CFR 60 – New Source Performance Standards, Subparts Cb – Ce & D – VVV, Subparts AAAA – UUUUa	New Source Performance Standards for multiple source categories	Different source category. For NSPS Subpart Kb, the vapor pressure of leachate (which is mostly comprised of water) in the storage tanks are expected to be below the applicable control threshold.
004 – MSW Landfill	40 CFR 60 Subpart XXX	NSPS for MSW Landfills That Commenced Construction, Reconstruction or Modification after July 17, 2014	The MSW landfill did not commence construction on a modification after July 17, 2014.
All Activities	40 CFR 61 Subparts B – L, Subparts N – Z, and Subparts AA – FF	National Air Emissions Standards for multiple source categories	Different source category
All Activities	40 CFR 62 Subparts A - LLL	State Plans for Designated Facilities	No applicable Part 62 regulations with the exception of Subpart OOO – Federal Plan (MSW Landfills)

Unit Ref. No., or activity to which requirement does <u>not</u> apply	**Citation**	**Brief description of requirement**	**Why the requirement does not apply**
All Activities	40 CFR 63 Subparts B – Z, AA – YY, CCC – XXX, CCCC - YYYY, AAAAA – ZZZZZ, AAAAAA – ZZZZZZ, and AAAAAAA – HHHHHHH	MACT standard for multiple source categories.	Different source category
LFG Gas Emissions	40 CFR Part 64	Compliance Assurance Monitoring (CAM)	Compliance Assurance Monitoring (CAM) is not applicable since the source is subject to an NSPS promulgated after November 15, 1990 (Landfill NSPS – 40 CFR 60 Subpart Cf)
All Activities	40 CFR Part 65	Consolidated Federal Air Rule	Not Applicable
All Activities	40 CFR Part 66	Assessment and Collection of Noncompliance Penalties by EPA	Not Applicable
All Activities	40 CFR Part 67	EPA Approval of State Noncompliance Penalty Program	Not Applicable
All Activities	40 CFR Parts 68	Chemical Accident Prevention Provisions	Source does not store chemicals in quantities which trigger the applicability of this regulation.
All Activities	40 CFR Part 69	Special Exemptions from Requirements of the Clean Air Act	No Claimed Exemptions
All Activities	40 CFR Part 71	Federal Operating Permit Program	Source is located in a state delegated to administer the Part 70 permitting program
All Activities	40 CFR Part 72 – 78	Acid Rain Regulations	No emissions unit of this type are at the facility
All Activities	40 CFR Parts 79 – 80, 85 - 88	Fuels Regulations, Vehicular Standards	Not Applicable
All Activities	40 CFR Part 81	Area Designations	Part 81 imposes no emissions limits
All Activities	40 CFR Part 91	Control of emissions from Marine Spark Ignition Engines	Source does not operate marine vessels.

Unit Ref. No., or activity to which requirement does <u>not</u> apply	**Citation**	**Brief description of requirement**	**Why the requirement does not apply**
All Activities	40 CFR Part 92	Control of Air Pollution from Locomotives and Locomotive Engines	Source does not operate locomotives or locomotive engines.
All Activities	40 CFR Part 93	Transportation and General Conformity	Not Applicable
All Activities	40 CFR Part 94	Control of emissions from Marine Compression Ignition Engines	Source does not operate marine vessels.
All Activities	40 CFR Part 95	Mandatory Patent Licenses	Not Applicable
All Activities	40 CFR Part 96 & 97	Federal and State NOX Budget Trading Programs and CAIR Programs	No emissions unit of this type are at the facility

APPENDIX A

Updated Emissions Calculations – Significant Activities

Input Review: Epperson TV Renewal Application

LANDFILL CHARACTERISTICS

Landfill Open Year	**1968**	
Landfill Closure Year (with 80-year limit)	**2019**	

MODEL PARAMETERS

Methane Generation Rate, k	**0.040**	*year-1*
Potential Methane Generation Capacity, Lo	**100**	*m3/Mg*
NMOC Concentration	**98**	*ppmv as hexane*
Methane Content	**50**	*% by volume*

WASTE ACCEPTANCE RATES

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
1968	22,120	24,332	0	0
1969	22,120	24,332	22,120	24,332
1970	22,130	24,343	44,240	48,664
1971	22,120	24,332	66,370	73,007
1972	22,110	24,321	88,490	97,339
1973	22,100	24,310	110,600	121,660
1974	22,200	24,420	132,700	145,970
1975	22,100	24,310	154,900	170,390
1976	22,100	24,310	177,000	194,700
1977	22,100	24,310	199,100	219,010
1978	22,100	24,310	221,200	243,320
1979	22,200	24,420	243,300	267,630
1980	22,100	24,310	265,500	292,050
1981	22,100	24,310	287,600	316,360
1982	22,100	24,310	309,700	340,670
1983	22,200	24,420	331,800	364,980
1984	22,100	24,310	354,000	389,400
1985	22,100	24,310	376,100	413,710
1986	22,100	24,310	398,200	438,020
1987	22,100	24,310	420,300	462,330
1988	31,000	34,100	442,400	486,640
1989	88,200	97,020	473,400	520,740
1990	88,300	97,130	561,600	617,760
1991	52,900	58,190	649,900	714,890
1992	146,700	161,370	702,800	773,080
1993	146,600	161,260	849,500	934,450
1994	146,900	161,590	996,100	1,095,710
1995	147,000	161,700	1,143,000	1,257,300
1996	274,000	301,400	1,290,000	1,419,000
1997	368,000	404,800	1,564,000	1,720,400
1998	339,000	372,900	1,932,000	2,125,200
1999	424,000	466,400	2,271,000	2,498,100
2000	505,000	555,500	2,695,000	2,964,500
2001	468,000	514,800	3,200,000	3,520,000
2002	422,000	464,200	3,668,000	4,034,800
2003	417,283	459,011	4,090,000	4,499,000
2004	436,907	480,598	4,507,283	4,958,011
2005	422,160	464,376	4,944,190	5,438,609
2006	467,601	514,361	5,366,350	5,902,985
2007	392,256	431,481	5,833,951	6,417,346

WASTE ACCEPTANCE RATES (Continued)

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
2008	447,773	492,550	6,226,207	6,848,827
2009	387,020	425,722	6,673,980	7,341,377
2010	316,877	348,565	7,060,999	7,767,099
2011	320,795	352,875	7,377,876	8,115,664
2012	355,746	391,321	7,698,671	8,468,538
2013	221,408	243,549	8,054,417	8,859,859
2014	214,989	236,488	8,275,825	9,103,408
2015	342,177	376,395	8,490,814	9,339,896
2016	388,746	427,621	8,832,991	9,716,290
2017	377,848	415,633	9,221,737	10,143,911
2018	255,483	281,031	9,599,585	10,559,544
2019	177,663	195,429	9,855,068	10,840,575
2020	0	0	10,032,731	11,036,004

Results

Year	Total landfill gas			Methane		
	(Mg/year)	*(m3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m3/year)*	*(av ft^3/min)*
1968	0	0	0	0	0	0
1969	2.171E+02	1.738E+05	1.168E+01	5.798E+01	8.691E+04	5.839E+00
1970	4.256E+02	3.408E+05	2.290E+01	1.137E+02	1.704E+05	1.145E+01
1971	6.261E+02	5.013E+05	3.369E+01	1.672E+02	2.507E+05	1.684E+01
1972	8.186E+02	6.555E+05	4.404E+01	2.187E+02	3.278E+05	2.202E+01
1973	1.003E+03	8.035E+05	5.399E+01	2.680E+02	4.018E+05	2.699E+01
1974	1.181E+03	9.457E+05	6.354E+01	3.155E+02	4.728E+05	3.177E+01
1975	1.353E+03	1.083E+06	7.277E+01	3.613E+02	5.415E+05	3.638E+01
1976	1.516E+03	1.214E+06	8.158E+01	4.050E+02	6.071E+05	4.079E+01
1977	1.674E+03	1.340E+06	9.005E+01	4.471E+02	6.701E+05	4.503E+01
1978	1.825E+03	1.461E+06	9.819E+01	4.875E+02	7.307E+05	4.910E+01
1979	1.970E+03	1.578E+06	1.060E+02	5.263E+02	7.889E+05	5.300E+01
1980	2.111E+03	1.690E+06	1.136E+02	5.638E+02	8.452E+05	5.679E+01
1981	2.245E+03	1.798E+06	1.208E+02	5.997E+02	8.989E+05	6.039E+01
1982	2.374E+03	1.901E+06	1.277E+02	6.341E+02	9.504E+05	6.386E+01
1983	2.498E+03	2.000E+06	1.344E+02	6.671E+02	1.000E+06	6.719E+01
1984	2.618E+03	2.096E+06	1.408E+02	6.992E+02	1.048E+06	7.042E+01
1985	2.732E+03	2.187E+06	1.470E+02	7.297E+02	1.094E+06	7.349E+01
1986	2.842E+03	2.275E+06	1.529E+02	7.590E+02	1.138E+06	7.644E+01
1987	2.947E+03	2.360E+06	1.586E+02	7.872E+02	1.180E+06	7.928E+01
1988	3.048E+03	2.441E+06	1.640E+02	8.142E+02	1.220E+06	8.200E+01
1989	3.233E+03	2.589E+06	1.739E+02	8.636E+02	1.294E+06	8.697E+01
1990	3.972E+03	3.180E+06	2.137E+02	1.061E+03	1.590E+06	1.068E+02
1991	4.682E+03	3.750E+06	2.519E+02	1.251E+03	1.875E+06	1.260E+02
1992	5.018E+03	4.018E+06	2.700E+02	1.340E+03	2.009E+06	1.350E+02
1993	6.261E+03	5.013E+06	3.368E+02	1.672E+03	2.507E+06	1.684E+02
1994	7.454E+03	5.969E+06	4.010E+02	1.991E+03	2.984E+06	2.005E+02
1995	8.603E+03	6.889E+06	4.629E+02	2.298E+03	3.445E+06	2.314E+02
1996	9.708E+03	7.774E+06	5.223E+02	2.593E+03	3.887E+06	2.612E+02
1997	1.202E+04	9.622E+06	6.465E+02	3.210E+03	4.811E+06	3.233E+02
1998	1.516E+04	1.214E+07	8.155E+02	4.048E+03	6.068E+06	4.077E+02

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	*(m3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m3/year)*	*(av ft^3/min)*
1999	1.789E+04	1.432E+07	9.625E+02	4.778E+03	7.162E+06	4.812E+02
2000	2.135E+04	1.709E+07	1.149E+03	5.702E+03	8.547E+06	5.743E+02
2001	2.547E+04	2.039E+07	1.370E+03	6.802E+03	1.020E+07	6.851E+02
2002	2.906E+04	2.327E+07	1.564E+03	7.762E+03	1.164E+07	7.818E+02
2003	3.206E+04	2.567E+07	1.725E+03	8.564E+03	1.284E+07	8.625E+02
2004	3.490E+04	2.795E+07	1.878E+03	9.322E+03	1.397E+07	9.388E+02
2005	3.782E+04	3.028E+07	2.035E+03	1.010E+04	1.514E+07	1.017E+03
2006	4.048E+04	3.241E+07	2.178E+03	1.081E+04	1.621E+07	1.089E+03
2007	4.348E+04	3.482E+07	2.339E+03	1.161E+04	1.741E+07	1.170E+03
2008	4.562E+04	3.653E+07	2.455E+03	1.219E+04	1.827E+07	1.227E+03
2009	4.823E+04	3.862E+07	2.595E+03	1.288E+04	1.931E+07	1.297E+03
2010	5.014E+04	4.015E+07	2.697E+03	1.339E+04	2.007E+07	1.349E+03
2011	5.128E+04	4.106E+07	2.759E+03	1.370E+04	2.053E+07	1.379E+03
2012	5.242E+04	4.197E+07	2.820E+03	1.400E+04	2.099E+07	1.410E+03
2013	5.385E+04	4.312E+07	2.897E+03	1.438E+04	2.156E+07	1.449E+03
2014	5.391E+04	4.317E+07	2.901E+03	1.440E+04	2.159E+07	1.450E+03
2015	5.391E+04	4.317E+07	2.900E+03	1.440E+04	2.158E+07	1.450E+03
2016	5.515E+04	4.416E+07	2.967E+03	1.473E+04	2.208E+07	1.484E+03
2017	5.681E+04	4.549E+07	3.056E+03	1.517E+04	2.274E+07	1.528E+03
2018	5.829E+04	4.667E+07	3.136E+03	1.557E+04	2.334E+07	1.568E+03
2019	5.851E+04	4.685E+07	3.148E+03	1.563E+04	2.343E+07	1.574E+03
2020	5.796E+04	4.641E+07	3.118E+03	1.548E+04	2.320E+07	1.559E+03
2021	5.568E+04	4.459E+07	2.996E+03	1.487E+04	2.229E+07	1.498E+03
2022	5.350E+04	4.284E+07	2.878E+03	1.429E+04	2.142E+07	1.439E+03
2023	5.140E+04	4.116E+07	2.766E+03	1.373E+04	2.058E+07	1.383E+03
2024	4.939E+04	3.955E+07	2.657E+03	1.319E+04	1.977E+07	1.329E+03
2025	4.745E+04	3.800E+07	2.553E+03	1.267E+04	1.900E+07	1.276E+03
2026	4.559E+04	3.651E+07	2.453E+03	1.218E+04	1.825E+07	1.226E+03
2027	4.380E+04	3.508E+07	2.357E+03	1.170E+04	1.754E+07	1.178E+03
2028	4.209E+04	3.370E+07	2.264E+03	1.124E+04	1.685E+07	1.132E+03
2029	4.044E+04	3.238E+07	2.176E+03	1.080E+04	1.619E+07	1.088E+03
2030	3.885E+04	3.111E+07	2.090E+03	1.038E+04	1.555E+07	1.045E+03

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m3/year)*	*(av ft^3/min)*
1968	0	0	0	0	0	0
1969	1.591E+02	8.691E+04	5.839E+00	6.124E-02	1.709E+01	1.148E-03
1970	3.119E+02	1.704E+05	1.145E+01	1.201E-01	3.350E+01	2.251E-03
1971	4.589E+02	2.507E+05	1.684E+01	1.767E-01	4.928E+01	3.311E-03
1972	5.999E+02	3.278E+05	2.202E+01	2.310E-01	6.444E+01	4.329E-03
1973	7.354E+02	4.018E+05	2.699E+01	2.831E-01	7.899E+01	5.307E-03
1974	8.655E+02	4.728E+05	3.177E+01	3.332E-01	9.296E+01	6.246E-03
1975	9.913E+02	5.415E+05	3.638E+01	3.816E-01	1.065E+02	7.153E-03
1976	1.111E+03	6.071E+05	4.079E+01	4.278E-01	1.194E+02	8.020E-03
1977	1.227E+03	6.701E+05	4.503E+01	4.723E-01	1.317E+02	8.852E-03
1978	1.338E+03	7.307E+05	4.910E+01	5.149E-01	1.437E+02	9.652E-03
1979	1.444E+03	7.889E+05	5.300E+01	5.559E-01	1.551E+02	1.042E-02
1980	1.547E+03	8.452E+05	5.679E+01	5.956E-01	1.662E+02	1.116E-02
1981	1.645E+03	8.989E+05	6.039E+01	6.334E-01	1.767E+02	1.187E-02
1982	1.740E+03	9.504E+05	6.386E+01	6.698E-01	1.869E+02	1.255E-02
1983	1.830E+03	1.000E+06	6.719E+01	7.047E-01	1.966E+02	1.321E-02
1984	1.918E+03	1.048E+06	7.042E+01	7.385E-01	2.060E+02	1.384E-02
1985	2.002E+03	1.094E+06	7.349E+01	7.708E-01	2.150E+02	1.445E-02
1986	2.083E+03	1.138E+06	7.644E+01	8.017E-01	2.237E+02	1.503E-02
1987	2.160E+03	1.180E+06	7.928E+01	8.315E-01	2.320E+02	1.559E-02
1988	2.234E+03	1.220E+06	8.200E+01	8.601E-01	2.399E+02	1.612E-02
1989	2.369E+03	1.294E+06	8.697E+01	9.122E-01	2.545E+02	1.710E-02
1990	2.911E+03	1.590E+06	1.068E+02	1.121E+00	3.126E+02	2.101E-02
1991	3.432E+03	1.875E+06	1.260E+02	1.321E+00	3.686E+02	2.476E-02
1992	3.678E+03	2.009E+06	1.350E+02	1.416E+00	3.950E+02	2.654E-02
1993	4.588E+03	2.507E+06	1.684E+02	1.766E+00	4.928E+02	3.311E-02
1994	5.463E+03	2.984E+06	2.005E+02	2.103E+00	5.867E+02	3.942E-02
1995	6.305E+03	3.445E+06	2.314E+02	2.427E+00	6.772E+02	4.550E-02
1996	7.115E+03	3.887E+06	2.612E+02	2.739E+00	7.642E+02	5.135E-02
1997	8.807E+03	4.811E+06	3.233E+02	3.390E+00	9.459E+02	6.355E-02
1998	1.111E+04	6.068E+06	4.077E+02	4.276E+00	1.193E+03	8.016E-02
1999	1.311E+04	7.162E+06	4.812E+02	5.047E+00	1.408E+03	9.461E-02
2000	1.565E+04	8.547E+06	5.743E+02	6.023E+00	1.680E+03	1.129E-01
2001	1.866E+04	1.020E+07	6.851E+02	7.185E+00	2.005E+03	1.347E-01
2002	2.130E+04	1.164E+07	7.818E+02	8.199E+00	2.287E+03	1.537E-01
2003	2.350E+04	1.284E+07	8.625E+02	9.046E+00	2.524E+03	1.696E-01
2004	2.558E+04	1.397E+07	9.388E+02	9.847E+00	2.747E+03	1.846E-01
2005	2.772E+04	1.514E+07	1.017E+03	1.067E+01	2.977E+03	2.000E-01
2006	2.967E+04	1.621E+07	1.089E+03	1.142E+01	3.186E+03	2.141E-01
2007	3.187E+04	1.741E+07	1.170E+03	1.227E+01	3.422E+03	2.300E-01
2008	3.344E+04	1.827E+07	1.227E+03	1.287E+01	3.591E+03	2.413E-01
2009	3.535E+04	1.931E+07	1.297E+03	1.361E+01	3.796E+03	2.551E-01
2010	3.674E+04	2.007E+07	1.349E+03	1.415E+01	3.946E+03	2.652E-01
2011	3.758E+04	2.053E+07	1.379E+03	1.447E+01	4.036E+03	2.712E-01
2012	3.842E+04	2.099E+07	1.410E+03	1.479E+01	4.126E+03	2.772E-01
2013	3.947E+04	2.156E+07	1.449E+03	1.519E+01	4.239E+03	2.848E-01
2014	3.951E+04	2.159E+07	1.450E+03	1.521E+01	4.244E+03	2.851E-01
2015	3.951E+04	2.158E+07	1.450E+03	1.521E+01	4.243E+03	2.851E-01
2016	4.042E+04	2.208E+07	1.484E+03	1.556E+01	4.341E+03	2.917E-01
2017	4.163E+04	2.274E+07	1.528E+03	1.603E+01	4.471E+03	3.004E-01

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m3/year)*	*(av ft^3/min)*
2018	4.272E+04	2.334E+07	1.568E+03	1.645E+01	4.588E+03	3.083E-01
2019	4.288E+04	2.343E+07	1.574E+03	1.651E+01	4.605E+03	3.094E-01
2020	4.248E+04	2.320E+07	1.559E+03	1.635E+01	4.562E+03	3.065E-01
2021	4.081E+04	2.229E+07	1.498E+03	1.571E+01	4.383E+03	2.945E-01
2022	3.921E+04	2.142E+07	1.439E+03	1.510E+01	4.211E+03	2.830E-01
2023	3.767E+04	2.058E+07	1.383E+03	1.450E+01	4.046E+03	2.719E-01
2024	3.620E+04	1.977E+07	1.329E+03	1.393E+01	3.887E+03	2.612E-01
2025	3.478E+04	1.900E+07	1.276E+03	1.339E+01	3.735E+03	2.510E-01
2026	3.341E+04	1.825E+07	1.226E+03	1.286E+01	3.589E+03	2.411E-01
2027	3.210E+04	1.754E+07	1.178E+03	1.236E+01	3.448E+03	2.317E-01
2028	3.084E+04	1.685E+07	1.132E+03	1.187E+01	3.313E+03	2.226E-01
2029	2.963E+04	1.619E+07	1.088E+03	1.141E+01	3.183E+03	2.139E-01
2030	2.847E+04	1.555E+07	1.045E+03	1.096E+01	3.058E+03	2.055E-01

Calculate Max Fugitive NMOC/VOC Emissions over next 7 years (assuming a 80% collection efficiency - long term/final cover in place - max year of gas production is 2023):

14.50	Mg/year *	0.20	=	2.90	Mg/year
				3.19	tons/year

Calculate "fugitive" LFG using 80% collection efficiency, to develop the emissions factor:

2,766	cfm produced *	0.2	=	553	ft3/min fugitive LFG
				290,721,840	ft3/year fugitive LFG
				290.72	mmscf/yr fugitive LFG

Calculate emissions factors for NMOC, CO2 & Methane, in terms of lbs/mmscf of fugitive LFG:

NMOC

3.19	tons/year *	2000	lbs/ton /	290.72	million ft3/yr fugitive LFG
			=	21.9504	lbs NMOC/million ft3 LFG

CO2

37672.80	Mg/year *	0.20	=	7534.56	Mg/year
				8288	tons/year
				57,017	lbs CO2/million ft3 LFG

CH4

13730.33	Mg/year *	0.20	=	2746.07	Mg/year
				3021	tons/year
Use 10% Cover Oxidation Factor from 40 CFR 98:				2719	tons/year
				18,702	lbs CH4/million ft3 LFG

Epperson Landfill
Update SO2 Emissions Factor

Maximum Gas Flow Rate: 2131 cfm
127860 scfh
0.12786 mmscf/hour
Maximum Operating Hours 8760 hours
H_2S 50 ppm (Highest Tested Value = 40 ppm in 2021)

Calculate Actual Emissions for Criteria Pollutants

SO2

50	ppm H2S x	64	mol. Wt. SO2 x	127,860	scfh x	8760	hrs x	1 T x	=		actual	=	
1,000,000		385.4	scf/lb-mole				yr	2000 lbs		**4.6**	tons/year	**1.06**	lbs/hour

Calculate new EIQ Emissions factor (lbs/mmscf)

8.30 lbs/mmscf LFG

Epperson Landfill: Landfill HAPs Emissions

2023 Fugitive Gas Production Rate = 553 cfm = 8,257,109 m^3/year
(assumes 80% collection efficiency)

UNCONTROLLED LANDFILL GAS CONCENTRATIONS (a) - (SCC 50200602)

CAS number	COMPOUND	Concentration ppmv*	MOLECULAR WEIGHT	GRAVIMETRIC CONCENTRATION (mg/M^3)	POTENTIAL TO EMIT HAPS (Mg/yr)	HAPS (lbs/hr)	HAPS (tons/yr)
71556	1,1,1-Trichloroethane (methyl chloroform)	0.48	133.42	2.62	0.0216	0.0054	0.0239
79345	1,1,2,2-Tetrachloroethane	1.11	167.86	7.62	0.0629	0.0158	0.0694
75343	1,1-Dichloroethane (ethylidene dichloride)	2.35	98.96	9.51	0.0785	0.0197	0.0867
75354	1,1-Dichloroethene (vinylidene chloride)	0.20	96.95	0.79	0.0065	0.0016	0.0072
107062	1,2-Dichloroethane (ethylene dichloride)	0.41	98.96	1.66	0.0137	0.0034	0.0151
78875	1,2-Dichloropropane (propylene dichloride)	0.18	112.99	0.83	0.0069	0.0017	0.0076
107131	Acrylonitrile	6.33	53.06	13.74	0.1134	0.0285	0.1251
75150	Carbon disulfide	0.58	76.14	1.81	0.0149	0.0037	0.0165
56235	Carbon tetrachloride	0.00	153.84	0.00	0.0000	0.0000	0.0000
463581	Carbonyl sulfide	0.49	60.07	1.20	0.0099	0.0025	0.0110
108907	Chlorobenzene	0.25	112.56	1.15	0.0095	0.0024	0.0105
75003	Chloroethane (ethyl chloride)	1.25	64.52	3.30	0.0272	0.0068	0.0301
67663	Chloroform	0.03	119.39	0.15	0.0012	0.0003	0.0013
75092	Dichloromethane (methylene chloride)	14.30	84.94	49.68	0.4102	0.1030	0.4526
100414	Ethylbenzene	4.61	106.16	20.02	0.1653	0.0415	0.1823
110543	Hexane	6.57	86.17	23.15	0.1912	0.0480	0.2109
108101	Methyl isobutyl ketone	1.87	100.07	7.65	0.0632	0.0159	0.0697
127184	Perchloroethylene (tetrachloroethene)	3.73	165.85	25.30	0.2089	0.0525	0.2305
79016	Trichloroethlyene	2.82	131.39	15.15	0.1251	0.0314	0.1381
75014	Vinyl chloride	7.34	62.50	18.76	0.1549	0.0389	0.1709
71432	Benzene	1.91	78.11	6.10	0.0504	0.0127	0.0556
74873	Methyl chloride(Chloromethane)	1.21	50.49	2.50	0.0206	0.0052	0.0228
108883	Toluene	39.30	92.13	148.09	1.2228	0.3072	1.3491
1330207	Xylene (isomers and mixtures)	12.10	106.16	52.54	0.4338	0.1090	0.4786
	Mercury Compounds *	0.00	200.61	0.00	0.0000	0.0000	0.0000
	Total HAPs:						**3.77**

*Assumes a gas collection system efficiency at closure of 75%.

***based on 11/98 AP-42 Factors for Landfill Gas**

Epperson Landfill
Final Cover Fugitive Emissions

40 Ton Articulated Haul Trucks

Length of Unpaved Haul Road, miles (one way)	0.76
Annual Amount Hauled, cubic yards	215,000
Annual Amount Hauled, tons (assumes 114 lbs/cubic foot for clay)	330,885
Avg. Weight of Material per Load, tons	40
Annual Vehicle Miles Traveled (round trip), VMT =	12,534

Annual Vehicle Miles Traveled (VMT) = 12,534

Emission Factor, lb./VMT PM10 = 1.3716

Emission Factor, lb./VMT PM = 5.0809

Emission Factor, lb./VMT PM2.5 = 0.1372

Overall Control Efficiency % (PM & PM10) = 70%

Overall Control Efficiency % (PM2.5) = 40%

Actual Emissions, Tons/yr. PM10 = 2.58

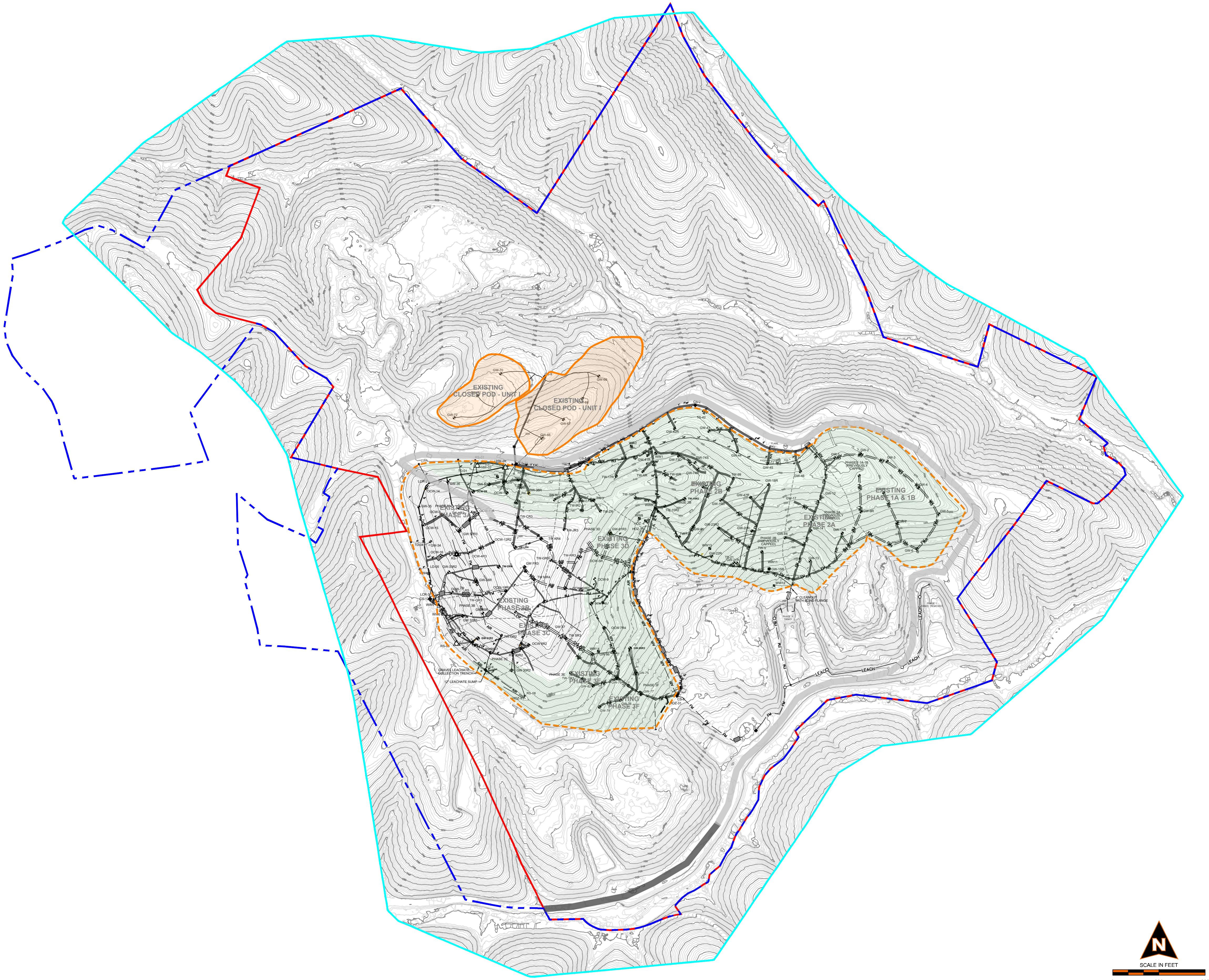
Actual Emissions, Tons/yr. PM = 9.55

Actual Emissions, Tons/yr. PM2.5 = 0.52

(Note - KDEP EIS factors for unpaved refuse truck haul roads used)

APPENDIX B

Site Plan Map



LEGEND

- LIMITS OF AREA BY AERIAL CONTRACTOR
- FACILITY PROPERTY BOUNDARY
- PERMITTED PROPERTY BOUNDARY
- CONSTRUCTED LIMITS OF WASTE
- EXISTING CELL LIMITS
- 800 — EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- 12" — EXISTING LANDFILL GAS HEADER
- AIR — EXISTING AIR LINE
- AIR — EXISTING AIR LINE JUMPER
- FM — EXISTING FORCEMAIN LINE
- EXISTING HORIZONTAL COLLECTOR
- EXISTING TOE COLLECTOR
- LEACH — EXISTING LEACHATE FORCEMAIN
- EXISTING LFG EXTRACTION WELL
- EXISTING LFG EXTRACTION WELL WITH PUMP
- EXISTING LFG HORIZONTAL EXTRACTION WELLHEAD
- R — EXISTING REMOTE WELLHEAD
- EXISTING CONDENSATE SUMP
- EXISTING BLIND FLANGE
- EXISTING CONTROL VALVE
- EXISTING WET WELL
- EXISTING ACCESS RISER
- EXISTING FORCEMAIN CLEANOUT
- EXISTING ROCK SUMP
- EXISTING FORCEMAIN AIR RELEASE VALVE
- EXISTING ROAD CROSSING
- EXISTING FINAL COVER AREA
- EXISTING PAVED ROADWAYS
- EXISTING UNPAVED ROADWAYS

NOTES:

1. *EXISTING AERIAL TOPOGRAPHY PROVIDED BY FIRMATEK AERIAL SURVEYS.*
2. *EXISTING AS-BUILT SURVEY DATA PROVIDED BY KENVIRONS INC. DATED FEBRUARY11, 2022*

EPPERSON WASTE DISPOSAL LF

TITLE V

PLAN VIEW

BEL ENVIRONMENTAL ENGINEERING

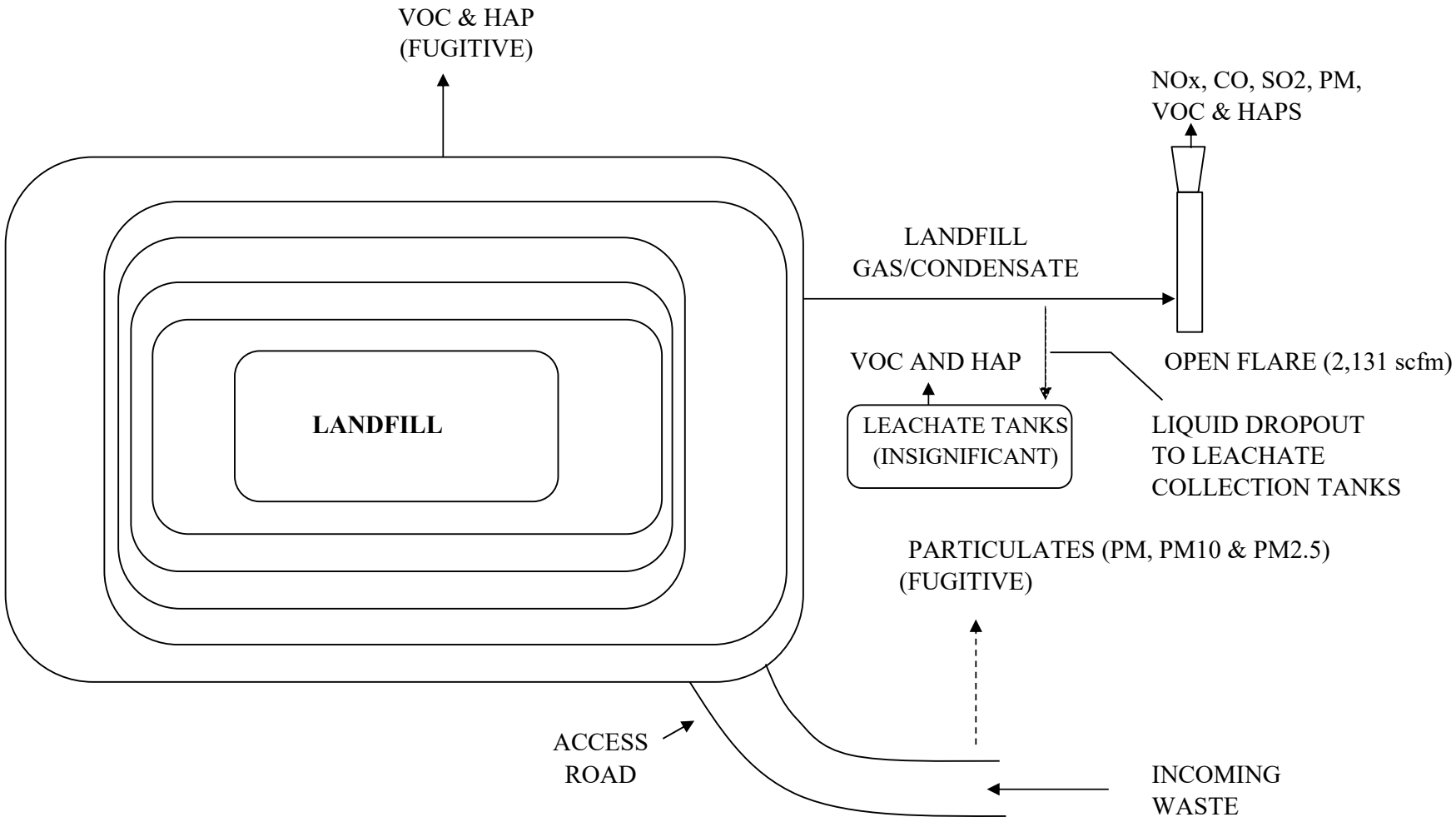
PROJECT NUMBER: 2023.244			
ENG:		AERIAL SURVEY DATE:	12/15/22
CAD:	BKG	SUBMITTAL DATE:	03/01/23
CHK:	DD	PLOT DATE:	3/3/23
REV.	DATE	DESCRIPTION	

DRAWING: 01 OF 01

Z:\SHARED\BEL-ENG\EPPERSON LF\2023\2023_244-TITLE V DRAWINGS\PLAN\01 PLAN VIEW.DWG 3/2/2023

APPENDIX C

Process Flow Diagram



	EPPERSON WASTE DISPOSAL, INC. TITLE 5 RENEWAL APPLICATION WILLIAMSTOWN, KENTUCKY
DES BY: LLN DATE: JUN 2023	
PREPARED BY: Environmental Information Logistics, LLC 130 E. Main Street Caledonia, MI 49316	PROCESS FLOW DIAGRAM LANDFILL AND MISCELLANEOUS SOURCES

ENVIRONMENTAL INFORMATION LOGISTICS, LLC

130 E. Main Street
Caledonia, MI 49316
Phone: 616-891-5873
Fax: 616-891-5720
www.EILLLC.com

November 22, 2023

Ms. Amy Tempus-Doom
Division for Air Quality - Permit Review Branch
300 Sower Blvd., 2nd Floor
Frankfort, KY 40601
Submitted Electronically – Kentucky Business One Stop Portal

RE: Epperson Waste Disposal Inc., Williamstown, Kentucky
Source I.D. No. 21-081-00018
Title 5 Operating Permit No. V-18-030 – Notice of Off-Permit Change

Dear Ms. Tempus-Doom:

The Epperson Waste Disposal Landfill (Epperson) located in Williamstown, Grant County, Kentucky was issued a Title V Operating Permit Renewal on December 13, 2018. The site is providing notice of an off-permit change to increase the number of incinerator ash stockpiles at the facility. A notice of off-permit change for an identical activity (three ash stockpiles) was submitted to KDEP last year and KDEP approved this activity on December 13, 2022. If the facility is awarded a project in the near future, a fourth incinerator ash stockpile will be added to the site.

The ash would be brought to the site in 2024 and would be used in a few years as vegetative cover in the capping process. Based on the description of volume provided by the customer (70,000 cubic yards), we anticipate that the single new stockpile will be approximately three acres in size, and will be placed in a flat pile. Once placement of the ash is complete, the stockpile will be seeded/vegetated as a best management practice for stormwater runoff. The roots from the vegetation will prevent soil erosion and fugitive particulate matter emissions.

The estimated emissions rates from material loading/unloading, and from the vegetated stockpiles, are 1.6 tons/year of PM, 0.8 tons/year of PM_{10} and 0.12 tons/year of $PM_{2.5}$. The 4th stockpile would be considered an insignificant activity under the Title 5 Operating Permit Program.

On behalf of Republic Services of Kentucky, LLC. (Republic), Environmental Information Logistics respectfully submits this notification of an off-permit change for the Epperson Waste Disposal Landfill. This notification is allowed, in lieu of a permit application, under Title 401 of the Kentucky Administrative Regulations, Chapter 52:020 (401 KAR 52:020), Section 18(2), provided the change, 1) does not violate Section 502(b)(10) of the Clean Air

Act [i.e., does not require New Source Review (NSR)], 2) is not subject to the Acid Rain Program, and 3) does not exceed any existing permitted emission limit.

The following information is being provided to support this request:

- Attachment 1: Emissions Calculations for Ash Stockpile (Material Loading/Unloading & Stockpile)
- Attachment 2: The proposed revised permit language.

If you have any questions or comments, please call me at (616) 891-2592 or Dave Vasbinder of Epperson at (314) 249-9404.

Sincerely,
Environmental Information Logistics, LLC

Laura L. Niemann, P.E.
Senior Project Engineer

cc: Dave Vasbinder, Epperson Waste Disposal (e-copy)

Attachment 1: Stockpile Emissions Calculations

		Flat Pile #1					
Year	Average Annual Size of Ash Pile[1] (acres)	PM Emissions (g/year)	PM_{10} Emissions (g/year)	$PM_{2.5}$ Emissions (g/year)	PM Emissions[9] tons/year	PM_{10} Emissions[9] tons/year	$PM_{2.5}$ Emissions[9] tons/year
2024	3.00	1,455,965	727,983	109,197	**1.60**	**0.80**	**0.12**
2025	1.50	727,983	363,991	54,599	0.80	0.40	0.06
2026	0.75	363,991	181,996	27,299	0.40	0.20	0.03
2027	0.10	48,532	24,266	3,640	0.05	0.03	0.00

Construction-Flat Piles

Threshold Friction Velocity[3] u_t^* (m/s)	Sum of Erosion Potentials[4] ΣPi (g/m^2)	Emission Factor (g/m^2)[6]		
		PM	PM_{10}	$PM_{2.5}$
0.62	120	120	60	9

Notes:

(1) Activity is for incinerator ash flat surfaces for a future single ash pile. To derive emission factors, flat surface will be 3.0 acres. Pile will be seeded after placement so this is assumed to be equivalent to a "crusted surface". The ash will eventually be used for a base layer to be placed prior to final cover construction, which is assumed to begin in 2025 and last for three years. Pile will decrease in size each year accordingly as ash material is consumed.

(2) Duration are the days of disturbance per year which is assumed to be equal to the number of days or frequency of disturbances (N) that occur for the exposed piles. Since piles are essentially completed, assume N = 2. Emissions from material management (drop operations) are calculated separately.

(3) For Flat Ash Piles the Threshold Friction Velocity was assumed to be equal to the "Scraper tracks on coal pile" value, 0.62 m/s, found in EPA AP-42 Table 13.2.5-2.

(4) Calculations to Determine the Erosion Potentials and the corresponding totals are from EPA AP-42 Section 13.2.5.
The calculations are based on daily Fastest-Mile Wind data for 2023 from NOAA's Local Climatological Data Daily Summary for Frankfort Capitol City Airport, KY for first half of year (Jan - Jun). Data from July- mid November 2023 to represent 2nd half of year.

(5) The equation for erosion potential for a dry, exposed surface is:

$$P = 58 (u^* - u_t)^2 + 25 (u^* - u_t)$$

Where: u^* = friction velocity (m/sec)

u_t = threshold friction velocity (m/sec) = 0.62 m/sec (see Note 3)

(6) Assuming 2 disturbances/year (N = 2), fastest-mile wind for Jan - June 2023 was 69 mph on 2/9/23 (30.85 m/sec) & fastest mile wind for 2nd half of year (July - mid November 2023 data) was 51 mph on 8/25/23 (22.8 m/sec)
Convert fastest mile of wind (u+) from a reference anemometer height of 10 meters to the equivalent friction velocity (u^*) m/sec using the following equation: $u^* = 0.053\ u_{10}^+$
Fastest mile of wind in February, 2023 is 69 mph or 30.85 m/sec.

u^* (m/sec) = 0.053 x 30.85 = 1.635 m/sec

Fastest mile of wind in August, 2023 is 51 mph or 22.8 m/sec.

u^* (m/sec) = 0.053 x 22.8 = 1.208 m/sec

Calculate emissions potential P_1 for first half of year:

$P_1 = 58 (1.635 - 0.62)^2 + 25(1.635 - 0.62) =$ 85.14 g/m^2

Calculate emissions potential P_2 for second half of year:

$P_2 = 58 (1.208 - 0.62)^2 + 25(1.208 - 0.62) =$ 34.79 g/m^2

(Σ Pi) = 119.93 g/m^2

(7) Emissions factors were calculated using Equation (2), EF = (k)*(Σ Pi), found in EPA AP-42 Section 13.2.5, where k is the particle size multiplier and ΣPi is the sum of the erosion potentials.

(8) The breakdown of particle sizes for the emission factor multiplier was taken from EPA AP-42 Section 13.2.5.3 and is summarized below.

Aerodynamic Particle Size Multiplier (k)		
PM	PM10	PM2.5
< 30 mm	< 10 mm	< 2.5 mm
1.00	0.50	0.075

(9) The final Total Emission in tons/year were converted from grams/year using the conversion factors of 1 lbs/453.6 g, and 1 ton/2000 lbs.

Epperson Landfill
Fugitive Emissions from Incinerator Ash Stockpile Placement/Removal

				Fugitive Dust Emissions (tons)		
Pile #	Pile Volume (yd^3)	Incinerator Ash Density (lb/yd^3)[1]	Incinerator Ash Tons	PM2.5	PM10	TSP
4	70,000	108	3,780	0.0000	0.0002	0.0004
TOTALS	70,000		3,780	**0.0000**	**0.0002**	**0.0004**

Ash Tons = Volume (cubic yards) X Ash Density (lbs/cubic yard) / 2000 lbs/ton

Formulas for Emissions Factors:
Aggregate Handling/Storage Piles (from AP-42 Chapter 13.2.4, 11/06) - Drop Operations:

E (lb/ton of material) = k x (0.0032) x [(U/5)^1.3 / (M/2)^1.4]

Constant	PM2.5	PM10	TSP	Comment
U (mph)	8.28	8.28	8.28	Wind speed for Louisville, KY from Tanks 4.0.9d Model database
M (%)	17	17	17	See Reference 1
k	0.053	0.35	0.74	AP-42 Chapter 13.2.4, 11/06
E (lb/ton)	**0.0000**	**0.0001**	**0.0002**	

[1]Reference 1: Federal Highway Administration: User Guide for Waste and Byproduct Materials in Pavement Construction, Publication No. FHWA-RD-97-148

Attachment 2: Revised Permit Language

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

Description	Generally Applicable Regulation
1. Five Leachate Tanks (30,000 gal each)	None
2. Leachate Tank (261,750 gal)	None
3. Two Diesel Tanks (8,000 gal each)	None
4. Diesel Tank (422 gal)	None
5. One parts cleaner station	None
6. Propane Tank (1000 gal)	None
7. Propane Tank (5000 gal)	None
8. Propane Tank (20 gal)	None

Add 9. Incinerator Ash Stockpiles. There are no applicable regulations.