Commonwealth of Kentucky
Division for Air Quality

STATEMENT OF BASIS / SUMMARY

Title V, Operating
Permit: V-25-009
Dozit Landfill
4075 State Route 360
Morganfield, Kentucky 42347
April 3, 2025
Eric Amdahl, Reviewer

SOURCE ID:	21-225-00061
AGENCY INTEREST:	15674
ACTIVITY:	APE20230003

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SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 4953, Refuse Systems (solid waste landfills)

Single Source Det. ☐ Yes ☒ No If Yes, Affiliated Source AI:

Source-wide Limit ☐ Yes ☒ No If Yes, See Section 4, Table A

28 Source Category ☐ Yes ☒ No If Yes, Category:

County: Union
Nonattainment Area ☒ N/A ☐ PM_{10} ☐ $PM_{2.5}$ ☐ CO ☐ NO_X ☐ SO_2 ☐ Ozone ☐ Lead

PTE* greater than 100 tpy for any criteria air pollutant ☐ Yes ☒ No
If yes, for what pollutant(s)?
☐ PM_{10} ☐ $PM_{2.5}$ ☐ CO ☐ NO_X ☐ SO_2 ☐ VOC

PTE* greater than 250 tpy for any criteria air pollutant ☐ Yes ☒ No
If yes, for what pollutant(s)?
☐ PM_{10} ☐ $PM_{2.5}$ ☐ CO ☐ NO_X ☐ SO_2 ☐ VOC

PTE* greater than 10 tpy for any single hazardous air pollutant (HAP) ☐ Yes ☒ No

PTE* greater than 25 tpy for combined HAP ☐ Yes ☒ No

*PTE does not include self-imposed emission limitations.

Description of Facility:
Dozit Landfill is a municipal solid waste landfill that commenced construction, reconstruction or modification on or after May 30, 1991 and has a design capacity greater than 2.5 million cubic meters by volume. This landfill has a calculated emission rate of less than 34 megagrams per year of non-methane organic compounds (NMOC).

The landfill began accepting waste in 1975, and is currently inactive. However, it is not considered a “closed” landfill under 40 CFR 60, Subpart Cf and may continue to accept waste in the future.

The source is required to obtain a Title V permit by 401 KAR 52:020, Section 1(4) and 40 CFR 60.31f(c). The source includes a landfill and associated equipment including fuel (diesel) tanks, haul roads, site construction, and leachate storage tanks.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: V-25-009 Activities: APE20230003

Received: May 12, 2023 Application Complete Date(s): July 9, 2023

Permit Action: ☐ Initial ☒ Renewal ☐ Significant Rev ☐ Minor Rev ☐ Administrative

Construction/Modification Requested? ☐Yes ☒No NSR Applicable? ☐Yes ☒No

Previous 502(b)(10) or Off-Permit Changes incorporated with this permit action ☐Yes ☒No

Description of Action:
Dozit Landfill applied to renew their Title V permit on May 12, 2023. Due to the renewal application, the following changes were made:

- Update to EU 001 that includes twelve passive landfill gas vents in certified closed areas.
- In August 2024, EPA published a final revision to AP-42, Chapter 2.4 for Municipal Solid Waste Landfills. While the emission factor data remained largely the same as the previously used draft AP-42 Chapter 2.4, the Division has incorporated the changes into the emission calculations for the uncaptured emissions from the landfill.
- Update to the landfill fugitive emission calculations to reflect site specific H_2S data.
- Update to the applicable landfill requirements reflect the applicability of 40 CFR 60, Subpart Cf instead of 40 CFR 60, Subpart WWW, which no longer applies.

The Division is unable to enforce the requirements of 40 CFR 60, Subpart Cf until a state plan implementing the regulation is approved. Until such time, the federal plan in 40 CFR 62, Subpart OOO applies and may not be included in the permit by the Division. The preamble to 40 CFR 62, Subpart OOO, as published in the Federal Register on May 21, 2021, states on page 27766, **VII. Title V Operating Permits**, *B. Title V and Delegation of Federal Plan*, paragraph 2, that a state or tribe may have authority to incorporate CAA section 111 requirements in their title V permits without first taking delegation of the Federal plan, but if they do not, then, "…a state or tribe should not issue a 40 CFR part 70 permit to a source before taking delegation of the CAA section 111 Federal plan." As such, any applicable requirements from 40 CFR 62, Subpart OOO have not been included in the permit.

The requirements from 40 CFR 60, Subpart Cf that are predicated on the approval of the state plan have been included in Section I such that the due dates are easier for the permittee to be aware of and comply with.

V-25-009 Emission Summary		
Pollutant	2023 Actual (tpy)	V-25-009 (tpy)
CO	0	4.44
NO_X	0	0
PT	0	0
PM_{10}	0	0
$PM_{2.5}$	0	0
SO_2	0	0

VOC	8.1	68.4
Lead	0	0
Greenhouse Gases (GHGs)		
Carbon Dioxide	9,581	31754
Methane	3,143	10,501
Nitrous Oxide	0	0
CO_2 Equivalent (CO_2e)	88,156	294,285
Hazardous Air Pollutants (HAPs)		
Dichloromethane	0.52	1.7
Ethyl Benzene	0.21	0.7
Hexane; N-Hexane[1]	---	0.82
Tetrachloroethylene[1] (PCE)	---	0.885
Toluene	1.6	5.2
Vinyl chloride	---	0.66
Xylenes (Total)	0.55	1.84
Combined HAPs:	2.85	14.6

1. Hexane, Tetrachloroethylene (PCE), and Vinyl chloride have not been previously included in the emissions inventory for the facility, however, the new emission factors for the pollutants published in AP-42, Table 2.4-1 have increased their potential to emit.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Unit 001 - Municipal Solid Waste (MSW) Landfill

Initial Construction and Modification Date: 1975, modified April 8, 1995

Process Description:
A MSW landfill that has accepted waste since November 8, 1987, commenced construction, reconstruction, or modification before July 17, 2014, having a design capacity equal to or greater than 2.5 million megagrams by mass or 2.5 million cubic meters by volume, and an NMOC emission rate (Calculated according to 40 CFR 60.35f) less than 34 Mg/yr. This landfill has 12 passive vents.

The landfill began accepting waste in 1975, and is currently inactive. However, it is not considered a "closed" landfill under 40 CFR 60, Subpart XXX and may continue to accept waste in the future.

Permitted Design Capacity: 5,220,000 Mg

Applicable Regulations:
401 KAR 53:010, *Ambient air quality standards*
401 KAR 61:036, *Emission guidelines and compliance times for municipal solid waste (MSW) landfills* requiring compliance with **40 CFR 60, Subpart Cf,** *Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills*
401 KAR 63:010, *Fugitive emissions*
40 CFR 61, Subpart M, *National Emission Standard for Asbestos*

PRECLUDED REGULATION:
401 KAR 63:002, Section 2(4)(hhh), 40 C.F.R. 63.1930 through 63.1990, Table 1 (Subpart AAAA), *National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills*

Comments:
Emission factors from AP 42-Table 2.4.1 (August 2024) and LandGEM. Previous experience indicates the H_2S concentration in AP 42-Table 2.4.1 (August 2024) and Landgem underestimates emission levels actually seen at landfills, therefore H_2S testing during the required Tier 2 testing events has been included in the permit.

If Dozit Landfill receives (From the Division of Waste Management) an increase in the permitted volume design capacity of the landfill by either lateral or vertical expansion based on its permitted design capacity as of July 17, 2014, the landfill must submit an application to the Division incorporating into the permit the requirements of 40 CFR 60, Subpart XXX with a specified date that construction on the lateral or vertical expansion is expected to occur. Pursuant to 40 CFR 60, Subpart XXX, modification does not occur until the permittee commences construction on the lateral or vertical expansion.

Emission Unit 003 - Paved and Unpaved Haul Roads

Initial Construction Date: 1975

Emission Unit 003 - Paved and Unpaved Haul Roads
Process Description: Paved haul roads and unpaved haul roads. Maximum Capacity: 18,528 VMT Control Devices: Water trucks **Applicable Regulation:** **401 KAR 63:010**, *Fugitive emissions* **Comments:** Potential emissions are calculated using the "maximum capacity" listed, however, roads at landfills change often, and the maximum capacity does not reflect the usage of the roads at any given time. The maximum capacity represents the maximum that the PTE was calculated with and a permit revision application should be submitted if this maximum is not adequate to estimate the potential emissions of the activity in the future.

Emission Unit 004 – Site Construction/ Operation
Initial Construction Date: 1975 **Process Description:** Material handling including equipment operations of bulldozer(s), compactor(s), excavator(s) and loader(s), soil material and soil covering operations. Maximum Capacity: 150,000 tons waste processed/yr Control Device: Wetting of material **Applicable Regulation:** **401 KAR 63:010**, *Fugitive emissions* **Comments:** Calculations based on 150,000 tons of waste processed/yr and water used for emissions reduction. Emissions are calculated using the "maximum capacity" listed, however, the maximum capacity does not reflect the permitted (via DWM) waste acceptance rate. The maximum capacity simply represents the maximum that the PTE was calculated with and a permit revision application should be submitted if this maximum is not adequate to estimate the potential emissions of the activity in the future.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Testing Requirements\Results

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
001	None	C_{NMOC} M_{NMOC}	40 CFR 60.754(a)(3)	Once every 5 years	U.S. EPA Method 25C	50 Mg	8.7 Mg/yr	173 ppmv as Hexane; 91,100 tpy waste disposed	N/A	9/21/1996
001	None	C_{NMOC} M_{NMOC}	40 CFR 60.754(a)(3)	Once every 5 years	U.S. EPA Method 25C	50 Mg	11.32 Mg/yr	187 ppmv as Hexane; 107,100 tpy waste disposed	N/A	9/3/2001-9/4/2001
001	None	C_{NMOC} M_{NMOC}	40 CFR 60.754(a)(3)	Once every 5 years	U.S. EPA Method 25C	50 Mg	29.9 Mg/yr	377 ppmv as Hexane; 112,900 tpy waste disposed	CMN20060003	11/29/2006-11/30/2006
001	None	C_{NMOC} M_{NMOC}	40 CFR 60.754(a)(3)	Once every 5 years	U.S. EPA Method 25C	50 Mg	27.26 Mg/yr	319 ppmv as Hexane; 97,700 tpy waste disposed	CMN20110003	10/25/2011-10/26/2011
001	None	C_{NMOC} M_{NMOC}	40 CFR 60.754(a)(3)	Once every 5 years	U.S. EPA Method 25C	50 Mg	6.1 Mg/yr	73 ppmv as Hexane; 0 tpy waste disposed	CMN20160003	10/17/2016-10/18/2016
001	None	C_{NMOC} M_{NMOC}	40 CFR 60.754(a)(3)	Once every 5 years	U.S. EPA Method 25C	50 Mg	13.7 Mg/yr	211 ppmv as Hexane; 0 tpy waste disposed	CMN20210002	2021
001	None	C_{NMOC} M_{NMOC}	40 CFR 60.754(a)(3)	Once every 5 years	U.S. EPA Method 25C	50 Mg	TBD	TBD	TBD	2026

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
001	None	H_2S ppm / TRS	401 KAR 50:045, Section 1	Once every 5 years	U.S. EPA Method 15/16; ASTM D4084; ASTM D5504; or Approved Alt.	N/A	0.31 lb/mmscf	1.05 ppm as H_2S / 10.6 ppm as TRS	CMN20210002	2021
001	None	H_2S ppm	401 KAR 50:045, Section 1	Once every 5 years	U.S. EPA Method 15/16; ASTM D4084; ASTM D5504; or Approved Alt.	N/A	TBD	TBD	TBD	2026

Footnotes:

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
N/A		

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 53:010, *Ambient air quality standards*. This regulation contains the primary and secondary ambient air quality standards for sulfur oxides, particulate matter, carbon monoxide, ozone, nitrogen dioxide, lead, hydrogen sulfide, gaseous fluorides, total fluorides, and odors are specified in Appendix A of 401 KAR 53:010.	Site-wide
401 KAR 63:010, *Fugitive Emissions*, applies to each affected facility which emits or may emit fugitive emissions provided such emissions are not elsewhere subject to an opacity standard within the administrative regulation of the Division for Air Quality.	EU 001, 003 & 004
401 KAR 61:036, *Emission guidelines and compliance times for municipal solid waste (MSW) landfills* requiring compliance with **40 CFR 60, Subpart Cf,** *Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills*, applies to each existing MSW landfill for which construction, reconstruction, or modification was commenced on or before July 17, 2014.	EU 001
40 CFR 61, Subpart M *National Emission Standard for Asbestos*, applicable to each active asbestos waste disposal site.	EU 001

Table C - Summary of Precluded Regulations:

Applicable Regulations	Emission Unit
401 KAR 63:002, Section 2(4)(hhh), 40 C.F.R. 63.1930 through 63.1990, Table 1 (Subpart AAAA), *National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste* Landfills, The applicability of this regulation is precluded by not adding liquid other than leachate in a controlled fashion into the waste mass (often in combination with recirculating leachate) to reach a minimum average moisture content of at least 40 percent by weight to accelerate or enhance the anaerobic (without oxygen) biodegradation of the waste.	001

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS (CONTINUED)

Table D - Summary of Non Applicable Regulations:

Non Applicable Regulations	Emission Unit
N/A	

Air Toxic Analysis
N/A

Single Source Determination
N/A

SECTION 5 – PERMITTING HISTORY

Permit	Permit Type	Activity#	Complete Date	Issuance Date	Summary of Action	PSD/Syn Minor
G-02-001	Initial General Title V	APE20050005	2000	7/11/2002	Initial Issuance of Title V General Permit	N/A
G-07-001	Renewal General Title V	APE20070001	3/11/2007	10/16/2007	Renewal of Title V General Permit	N/A
G-12-001	Renewal General Title V	APE20120003	10/4/2012	2/19/2013	Renewal of Title V General Permit	N/A
V-18-029	Renewal Title V	APE20170006	9/21/2017	11/24/2018	Change from General permit to individual permit	N/A

SECTION 6 – PERMIT APPLICATION HISTORY

N/A

APPENDIX A – ABBREVIATIONS AND ACRONYMS

AAQS – Ambient Air Quality Standards
BACT – Best Available Control Technology
Btu – British thermal unit
CAM – Compliance Assurance Monitoring
CO – Carbon Monoxide
Division – Kentucky Division for Air Quality
ESP – Electrostatic Precipitator
GHG – Greenhouse Gas
HAP – Hazardous Air Pollutant
HF – Hydrogen Fluoride (Gaseous)
MSDS – Material Safety Data Sheets
mmHg – Millimeter of mercury column height
NAAQS – National Ambient Air Quality Standards
NESHAP – National Emissions Standards for Hazardous Air Pollutants
NO_x – Nitrogen Oxides
NSR – New Source Review
PM – Particulate Matter
PM_{10} – Particulate Matter equal to or smaller than 10 micrometers
$PM_{2.5}$ – Particulate Matter equal to or smaller than 2.5 micrometers
PSD – Prevention of Significant Deterioration
PTE – Potential to Emit
SO_2 – Sulfur Dioxide
TF – Total Fluoride (Particulate & Gaseous)
VOC – Volatile Organic Compounds