Commonwealth of Kentucky
Division for Air Quality

STATEMENT OF BASIS / SUMMARY

Title V, Operating
Permit: V-26-026

Republic Services of Kentucky, LLC d/b/a Valley View Landfill
9120 Sulphur Road
Sulphur, Kentucky 40070

July 2, 2026
Eric Amdahl, Reviewer

SOURCE ID:	21-223-00005
AGENCY INTEREST:	4059
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: 175095

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

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

County: Trimble
Nonattainment Area ☒ N/A ☐ PM_{10} ☐ $PM_{2.5}$ ☐ CO ☐ NO_X ☐ SO_2 ☐ Ozone ☐ Lead
If yes, list Classification:

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
If yes, list which pollutant(s):

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

*PTE does not include self-imposed emission limitations.

Description of Facility:
Valley View Landfill in Trimble County, Kentucky is a municipal solid waste (MSW) landfill that commenced construction in 1983, and was modified in 1995 and 2007. This landfill and has a design capacity greater than 2.5 million cubic meters by volume. The landfill has a design capacity of 21,880,400 megagrams and a calculated emission rate of more than 50 megagrams per year of non-methane organic compounds (NMOC). The landfill had a calculated emission rate of more than 50 Mg of NMOC in 1996, submitted an initial Gas Collection and Control System (GCCS) plan on July 31, 1997, and installed a GCCS to comply with 40 CFR 60, Subpart WWW in 1998. Valley View Landfill received a permitted landfill expansion in 2004 and submitted an updated GCCS plan for the expanded landfill on August 31, 2007.

The landfill consists of Unit 1, which accepted between 1983 and 1988, Unit 2, accepted waste from 1988 through 1995, Unit 3, which started accepting waste in 1995, Unit 4, which started accepting waste in 1995, Unit 5, which started accepting waste in 2000, Unit 6, which started accepting waste in 2003, and Unit 7, which started accepting waste in 2005.

The landfill has the ability to send the landfill gas to an open flare or the associated renewable natural gas (RNG) facility Lightning Renewables – Valley View RNG (AI 175095). The RNG plant processes raw landfill gas from the GCCS owned and operated by Valley View Landfill through membrane separation and adsorption processes to refine the methane concentration and

remove contaminants to achieve pipeline-grade specifications for natural gas. The final product is injected into an existing natural gas pipeline.

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 a Gas Collection and Control System (GCCS), flare, fuel (diesel) tanks, gasoline storage & dispensing facility, haul roads, site construction, industrial waste solidification facility and leachate storage tanks.

In the absence of an approved state plan implementing 40 CFR Part 60, Subpart Cf, the landfill is subject to the federal plan under 40 CFR Part 62, Subpart OOO. Upon approval of Kentucky's state plan, the 40 CFR 60, Subpart Cf requirements implemented via 401 KAR 61:036 will apply in lieu of the federal plan.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: V-26-026 Activities: APE20230003

Received: 7/3/2023 Application Complete Date(s): 8/30/2023

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

- *APE20190001 – Off-Permit Change:* Update to the emission factors used for the solidification pit (EU 006) based off the maximum concentration in mg/l provided in a new set of waste analytical data.
- *APE20200004 – Off-Permit Change:* Update to the potential to emit calculations for paved and unpaved roads (EU 004b) based on an updated total vehicle miles traveled (VMT) for the site.
- *APE20210002 – Section 502(b)(10) Change:* Update to the maximum yearly capacity of site construction & operation (EU 005) from 427,704 tons per year to 550,000 tons per year.
- *APE20220002 – Section 502(b)(10) Change:* Update to the potential to emit calculations for paved and unpaved roads (EU 004b) based on an updated total vehicle miles traveled (VMT) for the site. The application amends the listed maximum capacity of Emission Unit 004b from 25,413 VMT to 32,836 VMT for paved roads and from 52,163 VMT to 97,728 VMT for unpaved roads.
- *APE20240002 – Section 502(b)(10) Change:* Replacement of the existing 4,600 standard cubic feet per minute (scfm) utility flare (EU 001a) with a new 4,000 scfm utility flare (EU 009).
- *APE20240010 – Section 502(b)(10) Change:* Modification of the new flare (EU 009) to equip a continuous pilot to keep thermocouples hot and to keep the flare in standby mode for future RNG plant outages.

Description of Action:
Valley View Landfill submitted an application to renew the current Title V permit. With this renewal, the following changes have been made:

- Emission calculations for the landfill and flare (EP 004a and 009) were updated to use the current version of AP-42, Chapter 2.4 (May 2025), as well as worst-case site specific data for H_2S.
- Updated permit language to be consistent and clear.
- Added the requirements of 40 CFR 60, Subpart Cf and 40 CFR 63, Subpart AAAA, while removing the requirements of 40 CFR 60, Subpart WWW, which are no longer applicable. The requirements from 40 CFR 60, Subpart Cf that are predicated on the approval of the state plan are included in Section I of the permit. The rest of the requirements are included in Section B and co-cited with the corresponding requirements from 40 CFR 63, Subpart AAAA where appropriate.

V-26-026 Emission Summary			
Pollutant	**2025 Actual (tpy)[3]**	**PTE V-26-026 (tpy)[2]**	**Combined Facility PTE (tpy)[1]**
CO	102.62	182.74	182.87
NO_X	30.79	40.08	40.57
PT	27.76	9.90	9.98
PM_{10}	27.28	9.90	9.98
$PM_{2.5}$	11.17	9.90	9.98
SO_2	6.95	26.64	26.65
VOC	39.31	3.75	3.84
Lead	0.0	0.0	0.000004
Greenhouse Gases (GHGs)			
Carbon Dioxide	74,751	118,177	119,274
Methane	5,035	483	482
Nitrous Oxide	0.34	1.28	1.28
CO_2 Equivalent (CO_2e)	215,821	132,034	133,133
Hazardous Air Pollutants (HAPs)			
2,4,5-Trichlorophenol	-[4]	6.01	6.01
2-Methylphenol	-[4]	3.01	3.01
3-Methylphenol	-[4]	3.01	3.01
4-Methylphenol	-[4]	3.01	3.01
Chlorobenzene	0.17	1.53	1.53
Cresol	-[4]	3.01	3.01
Dichloromethane	0.85	1.21	1.21
Hexane	-[4]	0.58	0.60
Hydrochloric Acid	1.28	4.08	4.08
Pentachloro-Phenol	-[4]	1.50	1.50
Tetrachloroethylene (PCE)	-[4]	0.64	0.64
Toluene	2.57	3.67	3.67
Xylenes (Total)	0.91	1.30	1.30
Combined HAPs:	6.1	36.56	36.61

[1]**Note:** The "combined facility PTE" includes both emissions from Valley View Landfill and Lightning Renewables – Valley View RNG. Because they are considered a "single source" their emissions must be counted together. The worst-case emissions for the combined facility PTE occur when the RNG facility does not operate and all landfill gas emissions are destroyed in Valley View Landfill's flare. Therefore, the flare and RNG plant at Lightning Renewables are not counted toward the combined facility PTE because the landfill can only generate a set quantity of gas.

[2]**Note:** This is the individual PTE for Valley View Landfill that does not include Lightning Renewables – Valley View RNG.

[3]**Note:** The actual reported emissions include emissions from fugitive sources not otherwise counted toward the Title V PTE.

[4]**Note:** Pollutant was not tracked in EIS for the 2025 inventory.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Unit 004a - Municipal Solid Waste (MSW) Landfill

Initial Construction and Modification Date: 1984, modified 1995 & 2007

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 63.1959) greater than 50 Mg/yr.

This landfill submitted an initial GCCS plan on July 31, 1997, and installed a GCCS to comply with 40 CFR 60, Subpart WWW in 1998. Valley View Landfill received a permitted landfill expansion in 2004, and submitted an updated GCCS plan for the expanded landfill on August 31, 2007. The system may send gas to EU009 or to the adjacent Lightning Renewables – Valley View RNG (AI 178754) facility. An updated gas collection and control plan was submitted on August 31, 2007 and approved by the Division for Air Quality (APE20140006) on April 21, 2014.

The landfill consists of Unit 1, which accepted between 1983 and 1988, Unit 2, accepted waste from 1988 through 1995, Unit 3, which started accepting waste in 1995, Unit 4, which started accepting waste in 1995, Unit 5, which started accepting waste in 2000, Unit 6, which started accepting waste in 2003, and Unit 7, which started accepting waste in 2005.

Permitted Design Capacity: 21,880,400 Mg

Applicable Regulations:
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.

401 KAR 61:036, *Ambient emission guidelines and compliance times for municipal solid waste (MSW) landfills*, applies to each MSW landfill that commenced construction, modification, or reconstruction on or before July 17, 2014. This regulation requires compliance with **40 CFR 60, Subpart Cf,** *Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills.*

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,* applies to each municipal solid waste (MSW) landfill that has accepted waste since November 8, 1987 or has additional capacity for waste deposition and has a design capacity equal to or greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters (m^3) and has estimated uncontrolled emissions equal to or greater than 50 megagrams per year (Mg/yr) NMOC as calculated according to 40 CFR 63.1959.

401 KAR 63:010, *Fugitive emissions,* applies to each affected facility which emits or could emit fugitive emissions not elsewhere subject to an opacity standard within 401 KAR Chapters 50 through 68.

Emission Unit 004a - Municipal Solid Waste (MSW) Landfill

401 KAR 63:015, *Flares,* applies to each affected facility which means flares as defined in 401 KAR 63:015, Section 2.

40 CFR 60.18, *General control device and work practice requirements,* applies to control devices (flare) used to comply with applicable subparts of 40 CFR part 60.

40 CFR 61, Subpart M, *National Emission Standard for Asbestos,* applies to each active asbestos waste disposal site.

40 CFR 63.11, *Control device and work practice requirements,* applies to control devices (flare) used to comply with applicable subparts of 40 CFR part 63.

Comments:
Emission factors from AP-42 Chapter 2.4 (May 2025) and site-specific data, including worst-case site specific H_2S concentration of 112 ppm. H_2S and TRS monitoring for the landfill gas collection system has been included in the permit and is used for accurate quantification of fugitive H_2S emissions and SO_2 emissions produced by the flare.

Monitoring of liquid levels for gas wells is included in the permit to ensure adequate gas collection which is dependent on the availability of well perforations. Excessive liquid in wells can also inhibit proper methane production and degrade monitored well parameters causing excessive oxygen intrusion and high temperatures.

The permit also includes alternate operating scenarios for GCCS Removal, Requests for Higher Operating Values (HOV), Requests for Decommissioning of Gas Collectors, and a Hydrogen Well Monitoring Plan.

Valley View Landfill has had gas collectors in the past that have demonstrated high temperatures and high hydrogen levels in certain wells. These well parameters are not necessarily indicative of a subsurface oxidation event, but must still be closely monitored. If the landfill is unable to maintain a gas collector at temperatures below 145°F and high levels of hydrogen (> 5%) have been detected, the landfill may request a particular well be included in the Hydrogen Well Monitoring Plan in Section H of the permit.

If Valley View 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 009 - Landfill Flare				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
Opacity	< 20%	401 KAR 63:015, Section 3	-	Weekly qualitative observations and recordkeeping.

Initial Construction and Modification Date: 2024; modified 2025

Process Description:
Open landfill flare with a 30 scfm continuous LFG pilot.
Model: John Zink ZEF
Maximum Capacity: 4000 scfm of landfill gas

Applicable Regulations:
401 KAR 61:036, *Emission guidelines and compliance times for municipal solid waste (MSW) landfills*, applies to each MSW landfill that commenced construction, modification, or reconstruction on or before July 17, 2014. This regulation requires compliance with **40 CFR 60, Subpart Cf,** *Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills.*

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,* applies to each municipal solid waste (MSW) landfill that has accepted waste since November 8, 1987 or has additional capacity for waste deposition and has a design capacity equal to or greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters (m^3) and has estimated uncontrolled emissions equal to or greater than 50 megagrams per year (Mg/yr) NMOC as calculated according to 40 CFR 63.1959.

401 KAR 63:015, *Flares,* applies to each affected facility which means flares as defined in 401 KAR 63:015, Section 2.

40 CFR 60.18, *General control device and work practice requirements,* applies to control devices (flare) used to comply with applicable subparts of 40 CFR part 60.

40 CFR 63.11, *Control device and work practice requirements,* applies to control devices (flare) used to comply with applicable subparts of 40 CFR part 63.

Comments: This flare is a control device installed to meet the requirements of 40 CFR 60.33f(c)(1) and 40 CFR 63.1959(b)(2)(iii)(A). Emission factors from AP-42 Chapter 2.4 (May 2025), Table 2.4-1, AP-42 Chapter 13.5, Table 13.5-1, and worst-case site specific H_2S concentration of 112 ppm and TRS concentration of 151.2 ppm. Control efficiency for Non-Methane Organic Compounds (NMOC) is 98%. This flare (EU 009) replaced a 4600 scfm flare, previously installed in 2016 (EU 001a).

Emission Unit 004b - Paved & Unpaved Haul Roads

Initial Construction Date: 1983

Process Description:
Paved haul roads and unpaved haul roads
Maximum Capacity: 32,836 VMT paved, 97,728 VMT unpaved
Control Devices: Water trucks

Applicable Regulation:
401 KAR 63:010, *Fugitive emissions,* applies to each affected facility which emits or could emit fugitive emissions not elsewhere subject to an opacity standard within 401 KAR Chapters 50 through 68.

Comments:
Emission factors from AP-42 Chapter 13.2.1 and AP-42 Chapter 13.2.2. 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 005 - Site Construction & Operation

Initial Construction Date: 1983

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: 550,000 tons/yr of waste processed
Control Devices: Wetting of Material

Applicable Regulation:
401 KAR 63:010, *Fugitive emissions,* applies to each affected facility which emits or could emit fugitive emissions not elsewhere subject to an opacity standard within 401 KAR Chapters 50 through 68.

Comments:
Calculations based on 550,000 tons of waste processed/yr and AP-42 Chapter 13.2.4. 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.

Emission Unit 006 – Industrial Waste Solidification Process

Initial Construction Date: 1984

Process Description: Mixing of liquid industrial wastes from various sources with dry mediums to form a solid to be landfilled.
Maximum Capacity: 15,000 tons/yr of liquid waste
Control Devices: None

Applicable Regulation:
401 KAR 63:010, *Fugitive emissions*, applies to each affected facility which emits or could emit fugitive emissions not elsewhere subject to an opacity standard within 401 KAR Chapters 50 through 68.

State-Origin Requirement:
401 KAR 63:020, *Potentially hazardous matter or toxic substances*, applies to each affected facility which emits or may emit potentially hazardous or toxic substances provide such emissions are not elsewhere subject to provisions of the administrative regulations of the Division for Air Quality.

Comments: Emissions from the source based on waste hauler analytical data and assumption of 100% VOC emission.

Emission Unit 007 – Gasoline Storage & Dispensing Facility

Initial Construction Date: 1998

Process Description: Storage and dispensing of gasoline.
Storage Capacity: 350 gallons
Maximum Throughput: 10,000 gal/yr dispensed

Applicable Regulation:
401 KAR 63:002, Section 2(4)(ddddd), **40 C.F.R. 63.11110 to 63.11132, Tables 1 to 3 (Subpart CCCCCC)**, *National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities,* applies to loading of gasoline storage tanks at gasoline dispensing facilities (GDF).

Comments: Emission factors from Tanks 4.09D.

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
004a[1]	None	H_2S ppm	401 KAR 50:045, Section 1	Within 180 days of final permit issuance, Annually thereafter	Method ASTM D5504	N/A	40.01 ppmv	Parameter was not submitted	CMN20190003	7/16/2019
004a	None	H_2S ppm	401 KAR 50:045, Section 1	Annual	Method ASTM D5504	N/A	65.51 ppmv	4,600 scfm	CMN20200003	8/4/2020
004a	None	H_2S ppm TRS ppm	401 KAR 50:045, Section 1	Annual	Method ASTM D5504	N/A	47.57 ppmv 75.87 ppmv	4,600 scfm	CMN20210004	8/11/2021
004a	None	H_2S ppm TRS ppm	401 KAR 50:045, Section 1	Annual	Method ASTM D5504	N/A	7.62 ppmv 22.67 ppmv	2,045 scfm	CMN20220003	8/17/2022
004a	None	H_2S ppm TRS ppm	401 KAR 50:045, Section 1	Annual	Method ASTM D5504	N/A	42.67 ppmvd 75.22 ppmvd	2,341 scfm	CMN20220007	12/7/2022
004a	None	H_2S ppm TRS ppm	401 KAR 50:045, Section 1	Annual	Method ASTM D5504	N/A	76.0 ppmv 106.7 ppmv	1,362 scfm	CMN20230004	8/9/2023

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
004a	None	H_2S ppm	401 KAR 50:045, Section 1	Annual	Method ASTM D5504	N/A	12.68 ppmv	2,240 scfm	CMN20240005	8/7/2024
		TRS ppm					57.67 ppmv			
004a	None	H_2S ppm	401 KAR 50:045, Section 1	Annual	Method ASTM D5504	N/A	112 ppmv	1,820.6 scfm	CMN20250004	7/9/2025
		TRS ppm					151.32 ppmv	1,820.6 scfm	CMN20250004	7/9/2025
004a	None	H_2S ppm	401 KAR 50:045, Section 1	Annual	U.S. EPA Method 15/16; ASTM D4084; ASTM D5504; or Approved Alt.	N/A	TBD	TBD	TBD	TBD
009	Flare	Net Heating Value	40 CFR 60.752(b)(2)(iii)(A)	Initial	US EPA Method 18	>7.45 MJ/scm	15.95 MJ/scm	1,820.6 scfm	CMN20250004	7/9/2025
		Actual Exit Velocity		Initial	US EPA Method 1 & 2	< 60.00 ft/sec	28.46 ft/sec	1,820.6 scfm	CMN20250004	7/9/2025
		Visible Emissions	40 CFR 60.18(f)(1)	Initial	US EPA Method 22	No visible emission to exceed total of 5 minutes during any	No Visible Emissions	1,820.6 scfm	CMN20250004	7/9/2025

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
						consecutive 2 hours.				

Footnotes:
Valley View Landfill calculated NMOC of greater than 50 Mg using the Tier I method and opted to install a GCCS rather than perform Tier II testing to determine a site specific concentration of NMOC.

Performance testing must be conducted in accordance with 401 KAR 50:045. The permittee must submit a test protocol to the Source Sampling Section at least 60 days prior to testing. Retesting may be required if results are invalid, if process or control device changes occur, or if compliance cannot be demonstrated. A test report must be submitted to the Source Sampling Section no later than 45 days after the completion of fieldwork.

1. A violation occurred during this test. Samples collected in bags were analyzed 8 days after collecting the sample. The typical timeframe for analyzation of a sample collected in a bag is 24 hours. No throughput and operating parameter were reported. In the report, a process rate of 50 MG/yr was used as a place holder based on AP-42, Table 2.4-2.

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
N/A	N/A	N/A

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 53:010, *Ambient air quality standards*	Site-wide
401 KAR 61:036, *Ambient emission guidelines and compliance times for municipal solid waste (MSW) landfills.* This regulation requires compliance with **40 CFR 60, Subpart Cf,** *Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills*	004a, 009
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*	004a, 009
401 KAR 63:002, Section 2(4)(ddddd), **40 C.F.R. 63.11110 to 63.11132, Tables 1 to 3 (Subpart CCCCCC)**, *National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities*	007
401 KAR 63:010, *Fugitive emissions*	004a
401 KAR 63:015, *Flares*	009
401 KAR 63:020, *Potentially hazardous matter or toxic substances*	006
40 CFR 60.18, *General control device and work practice requirements*	009
40 CFR 61, Subpart M, *National Emission Standard for Asbestos*	004a
40 CFR 63.11, *Control device and work practice requirements*	009

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
N/A	N/A

Table D - Summary of Non-Applicable Regulations:

Non-Applicable Regulations	Emission Unit
N/A	N/A

Air Toxic Analysis

401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances*
The Division for Air Quality (Division) has performed refined air modeling using AERMOD on December 23, 2017 of potentially hazardous matter or toxic substances that may be emitted by the facility based upon the process rates, material formulations, stack heights and other pertinent information provided by the applicant. Based upon this information, the Division has

determined that the conditions outlined in this permit will assure compliance with the requirements of 401 KAR 63:020.

Single Source Determination

Valley View Landfill, source ID #: 21-223-00005 (A.I. #4059), and the adjacent Lightning Renewables – Valley View RNG, source ID #: 21-223-00022 (A.I. #175095), are considered by the cabinet and the United States Environmental Protection Agency to be a "single source" in determining applicability under 401 KAR 51:017, Prevention of significant deterioration of air quality (PSD) and 401 KAR 52:020, Title V permits. Each source is subject to 401 KAR 52:020 and will be issued individual Title V operating permits. Pursuant to the respective Title V permits, each permittee is responsible and liable for their own violations unless there is a joint cause for the violations.

SECTION 5 – COMPLIANCE ASSURANCE MONITORING

40 CFR 64, *Compliance assurance monitoring* (CAM) applies to a pollutant-specific emissions unit at a major source that is required to obtain a part 70 or 71 permit if the unit satisfies all of the following criteria:

(1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under 40 CFR 64.2(b)(1);
(2) The unit uses a control device to achieve compliance with any such emission limitation or standard; and
(3) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

Emission Unit	Criteria 1 (Y/N)	Criteria 2 (Y/N)	Criteria 3 (Y/N)	Does CAM apply? If Y for criteria 1, 2, AND 3, then Yes, Otherwise, No.
001a	N	N	N	No
004a	N	N	N	No
004b	N	N	N	No
005	N	N	N	No
006	N	N	N	No

***** If Yes, CAM applies for any of the emission units above, then see further clarification for each listed emission unit in **Section 3**.

SECTION 6 – PERMITTING HISTORY

Permit	Permit Type	Activity #	Complete Date	Issuance Date	Summary of Action	PSD/Syn Minor
S-99-103	Construction/ Operating	Unknown	Unknown	9/24/1999	Addition of enclosed combustion device and open flare	N/A
S-99-103 R1	Construction/ Operating	Unknown	2/11/2000	3/31/2000	Name change	N/A
G-02-001	Initial	APE20050002	Unknown	7/11/2002	Initial Issuance of Title V General Permit	N/A
G-07-001	Operating	APE20070002	3/15/2007	10/16/2007	Renewal of General Title V Permit	N/A
G-12-001	Operating	APE20110005	5/1/2012	2/19/2013	Renewal of General Title V Permit	N/A
V-18-038	Renewal	APE20170013	2/9/2018	1/13/2019	Change from General permit to individual permit. Replacement flare (EU 001a)	N/A

SECTION 7 – 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
CFM – Cubic Feet per Minute
CO – Carbon Monoxide
Division – Kentucky Division for Air Quality
ESP – Electrostatic Precipitator
GCCS – Gas Collection and Control System
GHG – Greenhouse Gas
HAP – Hazardous Air Pollutant
HF – Hydrogen Fluoride (Gaseous)
HOV – Higher Operating Value
H_2S – Hydrogen Sulfide
MSDS – Material Safety Data Sheets
mmHg – Millimeter of mercury column height
MSW – Municipal Solid Waste
NAAQS – National Ambient Air Quality Standards
NESHAP – National Emissions Standards for Hazardous Air Pollutants
NMOC – Nonmethane Organic Compounds
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)
TRS – Total Reduced Sulfur
VMT – Vehicle Miles Traveled
VOC – Volatile Organic Compounds

APPENDIX B – GCCS PLAN HISTORY AND REQUESTED ALTERNATIVES

This landfill submitted an initial GCCS plan on July 31, 1997, and installed a GCCS to comply with 40 CFR 60, Subpart WWW in 1998. Valley View Landfill received a permitted landfill expansion in 2004, and submitted an updated GCCS plan for the expanded landfill on August 31, 2007.

The updated gas collection and control plan was submitted on August 31, 2007 and approved by the Division for Air Quality (APE20140006) on April 21, 2014. Below are the determinations made by the Division.

The Division approved of the general update to the design plan as outlined in Sections I and II.

Valley View Landfill requested several alternative monitoring/recordkeeping/reporting scenarios in Section III of the updated design plan. Below is a detailed response for each one. For the sake of brevity, only the relevant sentences from the source have been included:

Request #1: *"Valley View Landfill may use passive gas flares as an option for gas collection and control, especially in areas where header installation would not be feasible due to active filling at interim landfill grades. The passive flares will be installed for odor control in non-NSPS areas (i.e. areas that do not meet the age criteria for NSPS control), and the site will not conduct any monitoring or recording activities for these flares.*

The site may place these passive flares in NSPS areas on a temporary basis (i.e. for less than one year) in an effort to control odors and NMOC emissions until the active gas system can be expanded or repaired in the NSPS area. The passive flares will be used to supplement the existing gas system and in areas where construction of the gas header pipeline is not feasible at the time. The facility is requesting a variance from the monitoring and recordkeeping activities for the passive flares for the one-year period the passive flares would be in operation."

Division's Response: The Division concurs that monitoring or recording activities are not necessary for flares installed in non-NSPS areas. However, for any passive flares used in an NSPS area, the Division denies any blanket variances to applicable requirements. Variances to the applicable requirements for passive flares in NSPS areas must be made on a case-by-case basis. (See Applicability Determination Index (ADI) No. 0500095. The ADI can be accessed at http://cfpub.epa.gov/adi)

Request #2: *"Valley View Landfill is proposing to widen the spacing between intervals from 30 meters to 60 meters in areas that have had final cover placed, where the final cover consists of a geomembrane. The facility also proposes to exclude dangerous areas…if the monitoring technician believes that the conditions may cause physical harm."*

Division's Response: The Division denies the request to widen the spacing between surface monitoring intervals from 30 meters to 60 meters in areas that will have a final cover in place. This is consistent with the EPA's past determinations (See ADI No. 0400033 and 0800018). 40 CFR 60.753 (d) already provides for exclusion of dangerous areas, so Division approval of exclusion of dangerous areas is unnecessary.

Request #3: *"The facility is requesting a higher oxygen level (up to 10%) as long as gas temperature is below 38°C (100°F)."*

Division's Response: The Division denies this request. The Division cannot approve blanket Higher Operating Values (HOVs). Determination must be made on a case-by-case basis. 40 CFR 60.753 (c) reads "The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at ***a particular well***." This implies that blanket approvals of HOVs are unacceptable. Each HOV request must contain supporting data that the elevated temperature does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens. To make this determination, applicants typically submit several months of monitoring data through different season showing the temperature, oxygen percentage, carbon monoxide concentration and percentage of methane at the wells in question. The affected well should be indicated on a map along with an indication of whether there are any physical signs of a fire such as smoke or subsidence in the area around the well. (See ADI No. 0800018)

Request #4: *"Valley View proposes to make the following changes to its standard operating procedure for wells where oxygen cannot be brought to below 5% even at reduced vacuums."*

Division's Response: The Division denies this request. The Division cannot approve blanket Revised Standard Operating Procedures (RSOPs). Determination must be made on a case-by-case basis. Each RSOP request must be supported by data and the affected well should be indicated on a map when submitted.

Request #5: *"The facility is requesting that this 180 day start-up provision apply to newly installed wells, or replacement wells."*

Division's Response: The Division denies this request. Valley View Landfill may request alternative procedures to measure Nitrogen, Oxygen, and/or Temperature or request Higher Operating Value limits. If the facility is unable to correct exceedances within 15 days of well installation or replacement, an alternative timeline request must be made. (See ADI No. 0800018)

Request #6: *"The facility is requesting that the one hour/five day shutdown limitations of the NSPS not apply to the facility now that the Landfill NESHAP has been promulgated. These events will now be governed by the more stringent SSM plan recordkeeping and reporting requirements of the Landfill NESHAP.*

Division's Response: The Division denies this request. The one hour/five day shutdown limitation changes have not been finalized. (See ADI No. 0800018)

Request #7: *"Unlike the vertical gas extraction wells, the leachate sump draws from the leachate collection system beneath the refuse. Concentrations of air within these extraction points will not cause subsurface oxidation within the refuse, as could potentially happen in a classic vertical extraction well within refuse. Therefore, the facility is requesting that the nitrogen/oxygen exceedance limits not apply to the leachate cleanout riser and leachate sump extraction points. Other states have agreed with this variance request and have granted exemptions for leachate sumps/cleanout risers from NSPS monitoring."*

Division's Response: The Division denies this request. The Valley View Landfill may formally propose alternative monitoring procedures or alternative operating parameters for subject collection systems but the source cannot be exempt from the operating parameter requirements altogether. Leachate cleanout riser and leachate sump extraction points will be subject to the control and monitoring requirements in Subpart WWW if the they are collecting gas from areas

where waste has been in place for five years or more in active areas or where waste has been in place for two years or more either in closed areas or in areas that are at final grade. The operational requirements apply both to extraction points that must be connected to the NMOC control system and to extraction points that are connected to the NMOC system at the discretion of the landfill owner/operator. (See ADI No. 0800018, 0600096, and a letter dated 11/7/2008 from EPA Region 4 to Ronald Gore)

Request #8: *"A close examination of the above "actual" NSPS language indicates that flow monitoring at a flare may be unnecessary for NSPS compliance purposes if the control device does not contain a bypass valve. The apparent intent of the regulation was to show that flow was going to the flare, and not down a bypass line. If there is no bypass line present at a site, and all flow goes to the flare, then flow monitoring should not be required….The Valley View Landfill gas collection and control system does not contain a bypass line. The flare system was designed and operated such that when the blowers shut down a main valve closes to prevent the escape of landfill gas if the control device is not operating. The Michigan Department of Environmental Quality has concurred with this request for NSPS landfills in Michigan, and has begun to remove the requirement for flare flow monitoring from several Renewable Operating Permits (ROP's)."*

Division's Response: The Division denies the request to remove the requirement for flare flow monitoring at Valley View Landfill. This data is required for EPA Greenhouse Gas (GHG) reporting, in addition to being necessary to ensure that the main valve is operating correctly, and to demonstrate compliance with the flare tip velocity maximum of 60 ft/sec in 40 CFR 60.18. The same report submitted to the EPA for GHGs should be submitted to the KYDAQ.

Request #9: *"The facility is requesting a variance from the monitoring requirements for open flares for the future passive flares used on a temporary basis in NSPS areas (i.e. less than 12 months). The use of passive flares will be in isolated areas and be in addition to (and not replace) the main control device at the site."*

Division's Response: The Division denies this request. It is not a variance request, but a request to be exempt from operational requirements and as such is a relaxation of the requirements. (See ADI No. 0800018)

Request #10: *"As stated previously, if Valley View elects to use passive flares in NSPS areas on a temporary (less than twelve month basis), the facility is requesting a variance to not monitor or record flame presence or gas flow for the temporary passive flares. The use of passive flares will be in isolated areas and be in addition to (and not replace) the main open flare used for control."*

Division's Response: The Division denies this request. It is not a variance request, but a request to be exempt from monitoring and recordkeeping requirements and as such is a relaxation of the requirements. (See ADI No. 0800018)

Request #11: *"The facility is proposing to submit reports to coincide with the semiannual Title V report schedule (i.e. semiannual reports due January 30 and July 30) vs. submitting one annual report."*

Division's Response: This is acceptable to the Division since more frequent reporting is not a relaxation of the standards. (See ADI No. 0800018)

Request #12: *"The facility is requesting a variance from testing for the temporary passive flares used in NSPS areas for less than twelve months. The use of passive flares will be in isolated areas and be in addition to (and not replace) the gas treatment process or backup enclosed flare used for control."*

Division's Response: The Division denies this request. It is not a variance request, but a request to be exempt from performance testing requirements and as such is a relaxation of the requirements. In the case of passive flares proposed by Valley View Landfill, the company would be required to conduct testing to determine whether each unit complies with flare tip velocity and gas heating value limits in 40 CFR 60.18. (See ADI No. 0800018 and 0500095)