Commonwealth of Kentucky
Division for Air Quality

STATEMENT OF BASIS / SUMMARY

Title V, Operating
Permit: V-26-034

Boyd County Sanitary Landfill, Inc.
1837 River Cities Drive
Ashland, KY 41102

July 2, 2026
Walker Reeves, Reviewer

SOURCE ID:	21-019-00113
AGENCY INTEREST:	40319
ACTIVITY:	APE20220001

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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: 128843

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

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

County: Boyd
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:
Boyd County Sanitary Landfill, Inc. (Boyd County Landfill) in Boyd County, Kentucky is a municipal solid waste (MSW) landfill that commenced construction in 2004. The landfill has a design capacity of 30,138,406 short tons and a calculated emission rate of more than 50 megagrams per year of non-methane organic compounds (NMOC). The landfill submitted an initial Gas Collection and Control System (GCCS) plan on September 15, 2014, and installed a GCCS to comply with 40 CFR 60, Subpart WWW in 2015. Boyd County Sanitary Landfill submitted an updated GCCS plan for the landfill on June 17, 2020, then revised and resubmitted the plan on November 2, 2020 and March 22, 2021.

The project involving the addition of EU FL-01 (FLR-02) would have caused emissions from the unit to exceed the PSD major source threshold for SO_2 (250 tons/yr) by itself, triggering PSD review for the project. However, Boyd County Landfill (formerly Big Run Landfill) chose to take a federally enforceable emission limitation on SO_2 for EU FL-01 (FLR-02) to preclude the application of 401 KAR 51:017 (PSD), making it a synthetic minor project. Boyd County Landfill is considered a major stationary source for the purposes of PSD.

The landfill consists of Unit I, which is actively being filled and began accepting waste in 2004, and the future Unit II, which is not currently under construction.

The landfill has the ability to send the landfill gas to an open flare or the associated renewable natural gas (RNG) facility Big Run Power Producers (AI 128843). The RNG plant processes raw landfill gas from the GCCS owned by Boyd County 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, passive flares, fuel (diesel) tanks, haul roads, site construction, leachate storage tanks, and industrial waste solidification pit.

The facility also has several listed trivial activities such as used oil, hydraulic oil and motor oil storage tanks for maintenance activities and several small non-road engines related to maintenance activities (all less than 35 HP). The trivial activities at the facility are all included under items #12 and #13 of the trivial activities list.

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-26-034 Activities: APE20220001

Received: 1/18/2022 Application Complete Date(s): 3/19/2022

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:
Boyd County Landfill submitted an application to renew the current Title V permit. With this renewal, the following changes have been made:

- Maximum yearly capacity and emission factors for RD-01, Paved & Unpaved Haul Roads, was updated. The maximum capacity for unpaved haul roads was changed to 142,800 miles/year. The maximum capacity for paved roads was changed to 71,400 miles/year. Construction vehicles were added to the unit at 14,280 miles/year.
- Emission calculations for the landfill and flares (EU 001, FL-01, and EU 05) 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.
- Changed EU 4 – Material Handling and Storage emission calculations to account for Aggregate, Clay, Fill, and Cover separately. No actual physical changes occurred with this unit.
- 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-26-034 Emission Summary			
Pollutant	**2025 Actual (tpy)[3]**	**PTE V-26-034 (tpy)[2]**	**Combined Facility PTE (tpy)[1]**
CO	110.53	48.87	48.87
NO_X	202.13	28.15	28.15
PT	87.13	3.72	3.72
PM_{10}	34.90	3.72	3.72
$PM_{2.5}$	18.64	3.72	3.72
SO_2	49.21	263.18	263.18
VOC	27.05	4.30	4.35
Lead	0	0	0.0000044
Greenhouse Gases (GHGs)			
Carbon Dioxide	33,754	81,849	82,901
Methane	5,028	475	475
Nitrous Oxide	0	0.32	0.32

V-26-034 Emission Summary			
Pollutant	**2025 Actual (tpy)[3]**	**PTE V-26-034 (tpy)[2]**	**Combined Facility PTE (tpy)[1]**
CO_2 Equivalent (CO_2e)	174,538	95,228	96,280
Hazardous Air Pollutants (HAPs)			
Dichloromethane	0.31	0.93	0.93
Hydrochloric Acid	2.18	4.42	4.42
Naphthalene	0.008	1.71	1.71
Toluene	1.59	2.80	2.80
Xylenes	0.58	0.99	0.99
Combined HAPs:	5.01	14.28	14.29

[1]**Note**: The "combined Facility PTE" includes both emissions from Boyd County Landfill and Big Run Power Producers. 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 Boyd County Landfill's flare. Therefore, the flare and RNG plant at Big Run Power Producers 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 Boyd County Landfill and does not include Big Run Power Producers.

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

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Unit 001 - Municipal Solid Waste (MSW) Landfill

Initial Construction Date: 2004

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 Gas Collection and Control System (GCCS) plan for approval on September 15, 2014. The system may send gas to FL-01 (FLR-02) or to the adjacent Big Run Power Producers (AI 128843) facility. An updated gas collection and control plan was submitted on June 17, 2020, revised and resubmitted on November 2, 2020 and March 22, 2021, and was approved by the Division for Air Quality (AAP20200005) on March 26, 2021.

The landfill consists of Unit I, which is actively being filled and began accepting waste in 2004, and the future Unit II, which is not currently under construction.

Permitted Design Capacity: 30,138,406 short tons

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, *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.

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.

Emission Unit 001 - Municipal Solid Waste (MSW) Landfill

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 1400 ppm. H_2S 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.

Boyd County 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 Boyd County 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 FL-01 - Landfill Flare (FLR-02)				
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.
SO_2	240 tpy	To preclude 401 KAR 51:017	232.3 lb/MMscf; site-specific sampling for H_2S	Calculate rolling 12-month total emissions and monitoring, recordkeeping, and reporting.

Initial Construction Date: 5/15/2015

Process Description:
Open landfill flare which combusts landfill gas.
Model: LFG Specialties, LLC - Model PCFT124I10
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 1400 ppm. Control efficiency for Non-Methane Organic Compounds (NMOC) is 98%. This EU is identified with a designation of FL-01 in the KYEIS system and cannot be corrected due to data requirements.

Emission Unit 05 – Passive Landfill Flares (FL-03)				
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 Date: 3/1/2021

Process Description:
Open passive flares which combust landfill gas.
Model: EPG Companies Solar Spark – Model SFI-100
Maximum Capacity: 90 scfm each (360 scfm total) 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 1400 ppm. Control efficiency for Non-Methane Organic Compounds (NMOC) is 98%.

Emission Unit RD-01 - Paved & Unpaved Haul Roads

Initial Construction Date: 2004

Process Description:
Paved haul roads and unpaved haul roads.
Maximum Capacity: 71,400 VMT paved, 142,800 VMT unpaved, 14,280 VMT for cover/construction vehicles.
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 4 – Material Handling and Storage

Initial Construction Date: 2004

Process Description:
Material handling including soil in stockpiles and yard areas whether paved or unpaved, blasting to generate soil cover material and soil covering operations.
Maximum Capacity: Aggregate (4,000 tons/year), Clay (27,500 tons/year), Fill (350,000 tons/year), Cover (3,000 tons/year)
Control Devices: Dust Suppression (Wet Sweeping, Water Application, Chloride Dust Control, etc.)

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 13.2.4.

Emission Unit SA-01 – Industrial Waste Solidification Process				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
Naphthalene	1.64 tpy	401 KAR 63:020	3419 lb/yr	Monthly monitoring and recordkeeping.

Initial Construction Date: 2004

Process Description:
Mixing of liquid industrial wastes from various sources with dry mediums (such as fly ash) to form a solid to be landfilled.
Maximum Capacity: 94,000 tons per year 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*

Comments: Emissions from source based on Toxicity Characteristic Leaching Procedure (TCLP) maximum values for listed HAPs and assumption of 100% VOC emission. If more refined data becomes available for each waste, the more refined data should be used by the source for HAP calculations to ensure all HAPs are accounted for.

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 until >50 Mg	U.S. EPA Method 25C	50 Mg	46.4 Mg/yr	1320 ppmv as Hexane	CMN20080001	3/21/2008
001	None	C_{NMOC} M_{NMOC}	40 CFR 60.754(a)(3)	Once every 5 years until >50 Mg	U.S. EPA Method 25C	50 Mg	>50 Mg/yr	2980 ppmv as Hexane	CMN20100001	2/18/2010
001	None	C_{NMOC} M_{NMOC}	40 CFR 60.754(a)(3)	Once every 5 years until >50 Mg	U.S. EPA Method 25C	50 Mg	7.8 Mg/yr	81.8 ppmv as Hexane	CMN20100004	5/20/2010
001	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
FL-01 (FLR-02)	Flare (3000 scfm)	Net heating value	40 CFR 60.18(f)(3)	Initial	US EPA Method 18	> 7.45 MJ/scm	18.74 MJ/scm	2,997 scfm	CMN20150002	7/1/2015

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
FL-01 (FLR-02)	Flare (3000 scfm)	Actual Exit velocity	40 CFR 60.18(f)(4)	Initial	US EPA Method 1 & 2	< 60 ft/s	59.7 ft/s	2,997 scfm	CMN20150002	7/1/2015
FL-01 (FLR-02)	Flare (3000 scfm)	Visible Emissions	40 CFR 60.18(f)(1)	Initial	US EPA Method 22	No visible emission to exceed total of 5 minutes during any consecutive 2 hours.	No visible emissions recorded	2,997 scfm	CMN20150002	7/1/2015

Footnotes: Neither test protocols nor test reports for any H_2S sampling events have been submitted to the Division.

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.

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, *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*	EU 001, FL-01, 05
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*	EU 001, FL-01, 05
401 KAR 63:010, *Fugitive emissions*	EU 001, RD-01, 4, SA-01
401 KAR 63:015, *Flares*	EU FL-01, 05
401 KAR 63:020, *Potentially hazardous matter or toxic substances*	EU SA-01
40 CFR 60.18, *General control device and work practice requirements*	EU FL-01, 05
40 CFR 61, Subpart M, *National Emission Standard for Asbestos*	EU 001
40 CFR 63.11, *Control device and work practice requirements*	EU FL-01, 05

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 51:017, *Prevention of significant deterioration of air quality*	EU FL-01

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) performed ScreenView on June 5, 2026 for 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

Boyd County Landfill, Source ID #: 21-019-00113 (A.I. #40319), and the adjacent Big Run Power Producers, LLC, Source ID #: 21-019-00134 (A.I. #128843), 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.
001	N	N	N	No
FL-01	Y	N	Y	No
05	N	N	N	No
RD-01	N	N	N	No
4	N	N	N	No
SA-01	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
G-07-001	Initial	APE20050004	1/22/2007	12/20/2007	Initial General Title V Permit	N/A
G-12-001	Renewal	APE20120004	10/5/2012	2/19/2013	Renewal General Title V Permit	N/A
V-16-053	Renewal	APE20170002	12/19/2016	8/7/2017	Change from General permit to individual permit	Syn Minor
V-16-053 R1	Admin Amend	APE20180031	11/14/2018	11/15/2018	Name and ownership change	N/A
V-16-053 R2	Minor Rev	APE20200005	1/9/2021	6/9/2021	Removal of EU 2 (FL-01) and addition of passive flares	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
GHG – Greenhouse Gas
HAP – Hazardous Air Pollutant
HF – Hydrogen Fluoride (Gaseous)
HOV – Higher Operating Value
H_2S – Hydrogen Sulfide
MSDS – Material Safety Data Sheets
MSW – Municipal Solid Waste
mmHg – Millimeter of mercury column height
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)
VMT – Vehicle Miles Traveled
VOC – Volatile Organic Compounds

APPENDIX B – GCCS PLAN HISTORY AND REQUESTED ALTERNATIVES

Boyd County Landfill (formerly Big Run Landfill) submitted an initial GCCS plan September 15, 2014, and installed a GCCS to comply with 40 CFR 60, Subpart WWW.

An updated gas collection and control plan was initially submitted on June 17, 2020, revised and resubmitted on November 2, 2020 with additional information submitted on March 22, 2021 regarding liquids management at the landfill. This revised GCCS plan was approved by the Division for Air Quality (AAP20200005) on March 26, 2021. Below are the determinations made by the Division.

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

Boyd County Sanitary Landfill requested several alternatives 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: *For cells that have been active for 5 years or more and are not yet to final grades, temporary gas extraction wells, horizontal collection trenches and/or the leachate collection system will be used for gas extraction until the wells can be installed (i.e., final grades have been reached).*

Division's Response: The Division approves this request as long as the alternative gas collectors used meet the design requirements in 40 CFR 60, Subpart WWW and the general design for the collectors is included in the facility GCCS plan.

Request #2: *If the gas collection system is expanded into areas of the landfill that do not yet meet the above age criteria (for example, for odor control purposes), these wells would not be subject to the monthly monitoring requirements of the NSPS. This is due to the fact that from a waste age*

standpoint, the area of the landfill where these wells have been placed is not yet subject to control.

Division's Response: The Division concurs that the operational and recordkeeping requirements of the NSPS do not apply to gas collectors installed in non-NSPS areas.

Request #3: *The facility may use passive flares for spot odor control as needed once appropriate approvals have been obtained via modifications/off permit changes to the Title V operating permit. If a passive flare is used in a younger area of waste not subject to NSPS controls, no testing or monitoring or recording will be conducted.*

Division's Response: The Division concurs that the operational and recordkeeping requirements of the NSPS do not apply to flares installed in non-NSPS areas, however, these flares must still comply with any non-NSPS requirements pertaining to passive flares in the permit.

Request #4: *If a passive flare is used in an area that is subject to the NSPS control requirements based on waste age, the following measures will be taken to ensure the flare is compliant with the standards for an NSPS control device:*

- *The flare will be equipped with a thermocouple to monitor flame presence, and a data recorder to capture flare temperatures every 15 minutes. This was approved by USEPA Region 5 for the Pitsch Sanitary Landfill in Michigan. A copy of the approval is available upon request.*
- *The flare will receive a performance test to document compliance with 40 CFR 60.18 within 180 days of installation.*

Division's Response: The Division concurs that passive flares used in NSPS areas must comply with the requirements of the NSPS for flares and any requirements pertaining to passive flares included in the permit.

Request #5: *The landfill will reduce the surface monitoring frequency in certified closed areas of the landfill to an annual basis, once three clean consecutive quarters have been demonstrated in these closed areas. The frequency will return to quarterly if a surface emissions exceedance of 500 ppm or more is detected, until such time as the site can demonstrate three consecutive quarters with no exceedances.*

Division's Response: The Division concurs that any areas of the landfill that meet the definition of "Closed Landfill" in 40 CFR 60.751 and for which a closure report has been submitted pursuant to 40 CFR 60.757(d) may skip to annual monitoring pursuant to 40 CFR 60.756(f).

Request #6: *A close examination of the above "actual" NSPS language indicates that flow monitoring at an open 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 GCCS does not contain a bypass line. The system was designed and operated such that the blower shuts down and main valve closes to prevent the escape of landfill gas if the control devices are not operating.*

Division's Response: The Division denies the request to remove the requirement for flare flow monitoring at Boyd County Sanitary 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.