

Commonwealth of Kentucky
Division for Air Quality
STATEMENT OF BASIS / SUMMARY

Title V, Operating
Permit: V-25-031
Smithfield Packaged Meats Corp. – Grayson
800 CW Stevens Blvd.
Grayson, KY 41143

Ken Porter, Reviewer
November 12, 2025

SOURCE ID:	21-043-00038
AGENCY INTEREST:	725
ACTIVITY:	APE20250001

Table of Contents

SECTION 1 - SOURCE DESCRIPTION	2
SECTION 2 – CURRENT APPLICATION	3
SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS	4
SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS	13
SECTION 5 - PERMITTING HISTORY	14
SECTION 6 – PERMIT APPLICATION HISTORY	14
APPENDIX A – ABBREVIATIONS AND ACRONYMS	15
APPENDIX B – INDIRECT HEAT EXCHANGER EMISSION LIMITATIONS	15

SECTION 1 - SOURCE DESCRIPTION

SIC Code and description: 2013, Sausages and Other Prepared Meat Products (except lard made from purchased materials)

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: Carter

Nonattainment Area N/A PM₁₀ PM_{2.5} CO NO_x SO₂ Ozone Lead
If yes, list Classification:

PTE* greater than 100 tpy for any criteria air pollutant Yes No
If yes, for what pollutant(s)?
 PM₁₀ PM_{2.5} CO NO_x SO₂ VOC

PTE* greater than 250 tpy for any criteria air pollutant Yes No
If yes, for what pollutant(s)?
 PM₁₀ PM_{2.5} CO NO_x SO₂ 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:

Smithfield Packaged Meats Corp. - Grayson (SPMC), is a meat packing and meat products manufacturing facility located in Grayson, Kentucky. Raw meats are stuffed and loaded into casings upstream of the cooking and smoking operations at the plant. The products are then loaded onto racks for processing in one of the batch ovens with smoker unit. The facility consists of 10 meat smokehouses that are used to add flavor, color and aroma to meat products and each smokehouse is associated with an electric smoke generator.

SECTION 2 – CURRENT APPLICATION

Permit Number: V-25-031

Activity: APE20250001

Received: October 01, 2025

Application Complete Date(s): November 12, 2025

Permit Action: Initial Renewal Significant Rev Minor Rev Administrative
 Construction/Modification Requested? Yes No NSR Applicable? Yes No

Description of Action:

On October 01, 2025, the Division received an application from Smithfield Packaged Meats Corp. – Grayson for the renewal of the Title V permit with no changes from the previous permit (V-20-017 R1).

V-25-031 Emission Summary				
Pollutant	2024 Actual (tpy)	Previous PTE V-20-017 R1 (tpy)	Change (tpy)	Revised PTE V-25-031 (tpy)
CO	62.67	151.42	0.00	151.42
NO _x	5.63	38.95	0.00	38.95
PT	0.38	1.07	0.13	**1.20
PM ₁₀	0.38	1.07	0.13	**1.20
PM _{2.5}	0.33	0.88	0.01	**0.89
SO ₂	0.43	2.04	0.00	2.04
VOC	0.31	5.69	0.00	5.69
Lead	0.00	0.00	0.00	0.00
Greenhouse Gases (GHGs)				
Carbon Dioxide	6,975.32	46,228.21	0.00	46,228.21
Methane	0.16	1.11	0.00	1.11
Nitrous Oxide	0.13	0.85	0.00	0.85
CO ₂ e:	7,016.71	46,508.33	*-24.63	*46,483.70
Hazardous Air Pollutants (HAPs)				
Combined HAPs:	N/A	0.050	0.00	0.050
Formaldehyde	0.004	0.033	0.00	0.033

**PT, PM₁₀, PM_{2.5} increased due to correction to their values & the EPA PM_{2.5} calculator values.

*Global Warming Potentials equation values changed for Methane from 25 to 28 & Nitrous Oxide from 298 to 265
 CO₂e = Carbon Dioxide + (Methane * 28 [was 25]) + (Nitrous Oxide * 265 [was 298]).

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Units: EU01 & EU02 Two(2) Indirect Heat Exchanger 10.46 MMBtu/hr (each)					
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method	
PM	20% Opacity, except max. 40% opacity for not more than six (6) minutes in any sixty (60) consecutive minutes during cleaning the fire box or blowing soot	401 KAR 59:015, Section 4(2) and 401 KAR 59:015, Section 4(2)(b)	0.52 lb/MMscf EPA 2014 National Emission Inventory Ver.2 Tech Support Doc. July 2018 Table 4 – 69 and EPA PM _{2.5} calculator	These units are assumed to be in compliance with the allowable PM, opacity, and SO ₂ limitations while burning natural gas.	
	0.43 lb/MMBtu	401 KAR 59:015, Section 4(1)(c)			
SO ₂	1.93 lb/MMBtu	401 KAR 59:015, Section 5(1)(c)2.b	0.6 lb/MMscf AP-42 Table 1.4-2		
Process Description: Steam generated by the natural gas fired boilers are used to maintain the temperature and humidity.					
Emission Units:	Manufacturer	Model	Maximum Continuous Rating	Primary Fuel	Construction Commenced
EU01	Kewanee	H35-250	10.46 MMBtu/hr (each)	Natural Gas	1991
EU02					
Applicable Regulations:					
401 KAR 59:015, <i>New indirect heat exchangers</i> : apply to affected facility commenced on or after April 9, 1972, for an affected facility with a capacity of 250 MMBTU/hr heat input or less.					
401 KAR 60:005, Section 2(2)(d) , 40 C.F.R. 60.40c through 60.48c (Subpart Dc), <i>Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units</i> .					
State-Origin Requirement:					
401 KAR 63:020, <i>Potentially hazardous matter or toxic substances</i> , applicable to each affected facility which emits or may emit potentially hazardous matter or toxic substance (matter which may be harmful to the health and welfare of humans, animals, and plants, including, but not limited to, antimony, arsenic, bismuth, lead, silica, tin, and compounds of such materials), provided such emissions are not elsewhere subject to the provisions of the administrative regulations of the Division for Air Quality.					
Comments:					
For detailed emission limit calculations, see Appendix B – Indirect Heat Exchanger Emission Limitations .					
The particulate emissions factors have been updated using values from EPA 2014 National Emissions Inventory Ver. 2 Tech Support Doc. July 2018, EPA PM _{2.5} calculator, and AP-42.					

Emission Units: EU03 & EU04 Two(2) Indirect Heat Exchangers				
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	20% Opacity, except max. 40% opacity for not more than six (6) minutes in any sixty (60) consecutive minutes during cleaning the fire box or blowing soot	401 KAR 59:015, Section 4(2) and 401 KAR 59:015, Section 4(2)(b)]	(Natural Gas) 0.52 lb/MMscf EPA 2014 National Emission Inventory Ver.2 Tech Support Doc. July 2018 Table 4 – 69 (Biogas) 17 lb/MMscf AP 42 2.4-5	These units are assumed to be in compliance with the allowable PM, opacity, and SO ₂ limitations while burning natural gas.
	0.43 lb/MMBtu	401 KAR 59:015, Section 4(1)(c)		
SO ₂	1.93 lb/MMBtu	401 KAR 59:015, Section 5 (1) (a) 1. and 401 KAR 59:015, Section 5(1)(c)2.b.	(Natural Gas) 0.6 lb/MMscf AP-42 Table 1.4-2 (Biogas) 84.35 lb/MMscf 2018 Biogas Analysis	

Emission Units	Manufacturer	Model:	Maximum Continuous Rating	Primary Fuel		Construction Commenced
				Primary	Secondary	
EU03	Kewanee	H3S-100-G	4.16 MMBtu/hr	Natural Gas		1991
EU04	York Shipley	560C - H3D - 100-W030-NM 14-22810	4.19 MMBtu/hr	Biogas	Natural Gas	2014

Applicable Regulation:

401 KAR 59:015, *New indirect heat exchangers:* apply to affected facility commenced on or after April 9, 1972, for an affected facility with a capacity of 250 MMBTU/hr heat input or less.

State-Origin Requirement:

401 KAR 63:020, *Potentially hazardous matter or toxic substances,* applicable to each affected facility which emits or may emit potentially hazardous matter or toxic substance (matter which may be harmful to the health and welfare of humans, animals, and plants, including, but not limited to, antimony, arsenic, bismuth, lead, silica, tin, and compounds of such materials), provided such emissions are not elsewhere subject to the provisions of the administrative regulations of the Division for Air Quality.

Comments:

For detailed emission limit calculations, see **Appendix B – Indirect Heat Exchanger Emission Limitations.**

Steam generated by the natural gas fired boilers are used to maintain the temperature and humidity

Emission Units: EU03 & EU04 Two(2) Indirect Heat Exchangers

within the chamber of the smokehouses.

In 2014 an existing 4.16 MMBtu/hr biogas / natural gas boiler, (EU04) was replaced with a 4.19 MMBtu/hr biogas / natural gas boiler. The biogas is produced at the anaerobic treatment basin and has a heat content of 848.7 Btu/scf calculated from an average of five (5) biogas samples. SO₂ emissions for biogas are based on a 2018 biogas analysis. NO_x, CO and PM emissions are based on AP-42 Table 2.4-5 for combustion of biogas. For natural gas, the particulate emissions factors have been updated from EPA 2014 National Emissions Inventory Ver. 2 Tech Support Doc. July 2018.

Emissions Units: EU05 – EU14		Ten(10) Batch Smokehouse Ovens			
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method	
PM	20% Opacity	401 KAR 59:010, Section 3(1)(a)	0.52 lb/MMscf EPA 2014 National Emission Inventory Ver.2 Tech Support Doc. July 2018 Table 4 – 69 and EPA PM2.5 calculator	These units are assumed to be in compliance with the allowable PM limitation while burning natural gas.	
	2.34 lb/hr	401 KAR 59:010, Section 3(2), and 401 KAR 59:010, Section 5, Appendix A			
Maximum Continuous Rating	Process Throughput Rate	Primary Fuel	Manufacturer	Control Device	Construction Commenced
4.0 MMBtu/hr (for each oven)	4,400 lbs meat/hr (for each oven)	Natural Gas	Alkar	Wet Scrubber	1991
<p>There are ten batch smokehouse ovens. All ovens, (EU05 – EU14) are equipped with natural gas burners each having a rated heat input capacity of 4.0 MMBtu/hr each. In the batch smokehouses, meat products are loaded into the cooking chamber using specially designed racks known as “trees.” The temperature and humidity within the chamber are controlled using heat generated by the natural gas fired burners and steam produced by the natural gas and biogas fired boilers. Natural wood smoke can be injected into the batch smokehouses. Emissions from each batch smokehouse are routed through a scrubber and stack to the atmosphere.</p> <p>Applicable Regulation: 401 KAR 59:010, <i>New process operations</i>: apply to each affected facility or source, associated with a process operation, which is not subject to another emission standard with respect to particulates in this chapter, commenced on or after the classification date of July 2, 1975. 401 KAR 59:010, Section 2(2) defines “process weight” as “the total weight of all materials introduced into any affected facility which may cause any emission of particulate matter, but does not include liquid and gaseous fuels charged, combustion air, or uncombined water”. Particulate matter emissions from the ovens comes solely from natural gas combustion (i.e., the meat processed does not contribute to particulate matter emissions from the ovens). As such, the meat processed by the ovens is not considered in determining the process weight rate for 401 KAR 59:010 as it does not meet the 401 KAR 59:010, Section 2(2) definition. Similarly, the mass of natural gas and combustion air are not considered in determining the process weight rate. Therefore, the process weight rate for the ovens is 0 lb/hr, corresponding to a maximum allowable particulate matter emission rate of 2.34 lb/hr.</p> <p>State-Origin Requirements: 401 KAR 63:020, <i>Potentially hazardous matter or substances</i>: applicable to each affected facility which emits or may emit potentially hazardous matter or toxic substance as defined in 401 KAR 60:020 Section 2.</p> <p>Comments: There are typically 2 batches per day with cooking batch times being 12 – 13 hours. Particulate matter emission factors came from AP-42 1.4-2, EPA PM2.5 calculator, & EPA 2014 National Emissions Inventory Ver.2 Tech Support Doc. July 2018, Table 4-69 to achieve accurate values.</p>					

Emissions Units: EU5WS – EU14WS		Ten(10) Electric Smoke Generator Units				
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method		
CO	280 tons wood per year total for all ten smoke generators (12-month rolling total basis)	Preclude 401 KAR 51:017 Applicability	740 lb/ton (Stack Test: See Comments)	Monitor and maintain records of the monthly and 12-month rolling total sawdust and hardwood chip usage		
PM	20% Opacity	401 KAR 59:010, Section 3(1)(a)	0.52 lb/MMscf EPA 2014 National Emission Inventory Ver.2 Tech Support Doc. July 2018 Table 4 – 69 & EPA PM2.5 calculator	Compliance demonstrated with monitoring and recordkeeping requirements		
	2.34 lb/hr	401 KAR 59:010, Section 3(2), and 401 KAR 59:010, Section 5, Appendix A				
Maximum Continuous Rating	Process Throughput Rate	Primary Fuel	Manufacturer	Model	Control Device	Construction Commenced
26 lb/hr (ea)	4,400 lbs meat/hr (ea)	Sawdust / Hardwood Chips	Friedrich	NS-80-1	Wet Scrubber	2009
<p>Process Description: Natural wood smoke is produced by electric smoke generators heating sawdust / hardwood chips to a point of smothering but not igniting and then sent the smoke to the associated smokehouse oven.</p> <p>Applicable Regulation: 401 KAR 59:010, <i>New process operations</i>: apply to each affected facility or source, associated with a process operation, which is not subject to another emission standard with respect to particulates in this chapter, commenced on or after the classification date of July 2, 1975.</p> <p>State-Origin Requirements: 401 KAR 63:020, <i>Potentially hazardous matter or toxic substances</i>: applicable to each affected facility which emits or may emit potentially hazardous matter or toxic substance as defined in 401 KAR 63:020 Section 2.</p> <p>Precluded Regulations: 401 KAR 51:017, <i>Prevention of significant deterioration</i>: apply only to the construction of a new major stationary source or a project at an existing major source that commences construction after September 22, 1982 and locates in an area designated attainment or unclassifiable under 42 U.S.C. 7407(d)(1)(A)(ii) and (iii).</p> <p>Comments: The permittee shall monitor the amount of wood fuel (sawdust/hardwood chips) used. Emission limitation based on the amount of wood fuel (sawdust/hardwood chips) used. Emission factors values are based off multiple similar facilities stack tests. Max Run Time: (4 hr/batch)(2 batches/day)(6 day/week)(52 weeks/year)=2,496 hr/year (for each smoke generator) Max Rated Capacity: 26 lb/hr (each) The smoke generators do not run at maximum capacity but, each smoke generator uses 10 – 14 lbs. wood/hour.</p>						

Emission Unit: EU15			Biogas Flare		
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method	
PM	20% Opacity	401 KAR 63:015, Section 3	17.0 lb/MMscf AP-42 2.4-5	Compliance demonstrated with monitoring and recordkeeping requirements	
Emission Unit	Rated Capacity	Fuel	Manufacturer	Model	Construction Commenced
EU15	4.16 MMBtu/hr (64 cubic feet/min digester)	Biogas	Varec	244W	1991
<p>Applicable Regulation: 401 KAR 63:015, Flares: applicable to each affected facility which means flares as defined in Section 2 of 401 KAR 63:015</p> <p>Comments: Particulate matter from any flare cannot be greater than twenty (20) percent opacity for more than three (3) minutes in any one (1) day. SO₂ emissions are based on a 2018 biogas analysis. CO₂, CH₄, and N₂O emissions are based on annual emissions inventories 2010 – 2013. The FLARE (EU15) is to only operate when the 4.19 MMBtu/hr biogas-fired boiler (EU04) is down for service.</p>					

Emission Unit: EU16 Natural Gas-Fired Emergency Generator Engine

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
NO _x + HC	10.0 g/HP-hr	40 CFR 60.4233(d), referencing "Emergency" in Table 1 to 40 CFR 60, Subpart JJJJ	2254.2 lb/MMscf, AP-42 Table 3.2-3*	Refer to Comments section**
CO	387 g/HP-hr		3794.4 lb/MMscf, AP-42 Table 3.2-3	

Emission Unit	Maximum Continuous Rating	Manufacturer	Year	Primary Fuel	Construction Commenced
		Model	Serial Number		
16	60 kW, 98 HP 0.8108 MMBtu/hr	Generac	2023	Natural Gas	December 2024
		SG060	#3013773023		

Process Description:

Natural gas-fired emergency generator for backup power.

Applicable Regulation:

401 KAR 60:005 Section 2(2)(eeee), 40 C.F.R. 60.4230 through 60.4248, Tables 1 through 4 (**Subpart JJJJ**), *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines* is applicable to owners and operators of stationary spark ignition internal combustion engines that commence construction after June 12, 2006, where the stationary SI ICE are manufactured on or after January 1, 2009, for emergency engines with a maximum engine power greater than 25 HP.

401 KAR 63:002 Section 2(4)(eeee), 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (**Subpart ZZZZ**), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines* is applicable to owners/operators of a stationary RICE at a major or area source of HAP emissions.

Comments:

Rated Capacity: 0.8108 MMBtu/hr (98 HP)

*Emission factor used is for NO_x only.

**Compliance shall be demonstrated by either purchasing an engine certified according to procedures in 40 CFR 60, Subpart JJJJ or, for non-certified engines, demonstrating compliance with the emission standards specified in 40 CFR 60.4233(d) and according to the requirements specified in 40 CFR 60.4244, namely keep a maintenance plan and records of conducted maintenance, and maintain and operate the engine in a manner consisted with good air pollution control practices. The permittee shall also conduct an initial performance test to demonstrate compliance.

Insignificant Activities				
Emission Units:		Description	Rating	Generally Applicable Regulation
KY EIS ID	Plant ID			
IA01	IA1	Dayton Heater	90,000	401 KAR 59:010 & 401 KAR 63:020
	IA2	Dayton Heater	45,000	
	IA3	Bryant HVAC	24,000	
	IA4	Dayton Heater	75,000	
	IA5	Dayton Heater	60,000	
	IA6	Dayton Heater	60,000	
	IA7	Dayton Heater	100,000	
	IA8	Dayton Heater	35,000	
	IA9	Dayton Heater	35,000	
	IA10	Bryant HVAC	245,000	
	IA11	York HVAC	300,000	
	IA12	York HVAC	245,000	
	IA13	Bryant HVAC	300,000	
	IA14	Bryant HVAC	245,000	
	IA15	York HVAC	245,000	
	IA16	York HVAC	135,000	
	IA17	Greenheck Make-Up	225,000	
	IA18	Greenheck Make-Up	250,000	
	IA19	DUO-AIRE Make-Up	250,000	
	IA20	Rupp Make-Up	90,000	
	IA21	EVAPCO Refrigeration	5,300,000	
	IA22	EVAPCO Refrigeration	6,075,000	
	IA23	EVAPCO Refrigeration	6,075,000	
IA02	IA24	Lime Silo		N/A
	IA25	Parts Washer		N/A
	IA26	Parts Washer		N/A
	IA27	Exhaust Vent for Ovens (EU05 – EU14)		N/A
	IA28	Exhaust Vent for Ovens (EU05 – EU14)		N/A
	IA29	Exhaust Vent for Ovens (EU05 – EU14)		N/A

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	Throughput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
Smokehouse #2	Wet Scrubber	PM	401 KAR 59:010, Section 3(2), and 401 KAR 59:010, Section 5, Appendix A	N/A	Method 5	5.89 lb/hr	0.171 lb/hr	Process Rate/Load 40000 lbs	CMN20110004	9/8/2011
Smokehouse #2	Wet Scrubber	VOC		N/A	Method 25	N/A	0.42 lb/hr	Process Rate/Load 40000 lbs	CMN20110004	9/8/2011

Footnotes:

Comment from the tester: “Protocol stated that Smokehouse number 2 would be tested. I did not see smokehouse #2 in the permit, so I am not sure which EU this is. The listed process rate is for a 13-hour cycle.”

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
280 tons/yr of wood used by the ten smoke generators	To Preclude 401 KAR 51:017	EU05WS – EU14WS

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 59:010, <i>New process operations</i>	EU05 – EU14, EU05WS – EU14WS
401 KAR 59:015, <i>New indirect heat exchangers</i>	EU01, EU02, EU03, EU04
401 KAR 60:005, Section 2(2)(d) 40 C.F.R. 60.40c through 60.48c (Subpart Dc) <i>Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units</i>	EU01, EU02
401 KAR 60:005 Section 2(2)(eeee), 40 C.F.R. 60.4230 through 60.4248, Tables 1 through 4 (Subpart JJJJ), <i>Standards of Performance for Stationary Spark Ignition Internal Combustion Engines</i>	EU16
401 KAR 63:002 Section 2(4)(eeee), 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), <i>National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines</i>	EU16
401 KAR 63:015, <i>Flares</i>	EU15
401 KAR 63:020, <i>Potentially hazardous matter or toxic substances</i>	EU05 – EU14, EU05WS – EU14WS

Table C - Summary of Precluded Regulations:

401 KAR 51:017, <i>Prevention of significant deterioration of air quality</i>	EU05WS – EU14WS
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Table D - Summary of Non Applicable Regulations:

N/A

Air Toxic Analysis

401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances*

The Division has performed SCREEN View on April 6, 2020 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

N/A

SECTION 5 - PERMITTING HISTORY

Permit	Permit Type	Activity#	Complete Date	Issuance Date	Summary of Action	PSD/Syn Minor
S-10-069	Initial	APE20100001	5/8/2010	07/28/2010	Initial Permit	N/A
S-10-069 R1	Minor Revision	APE20100004	10/7/2010	12/15/2010	Addition of three(3) Roof Vents	N/A
S-10-069 R2	Minor Revision	APE20110001	12/29/2011	01/06/2012	Addition of Insignificant Activities	N/A
S-10-069 R3	Administration Amendment	APE20140002	7/7/2014	07/14/2014	Name Change	N/A
S-10-069 R4	Minor Revision	APE20140003	7/22/2014	08/17/2014	Replace Biogas Boiler	N/A
S-10-069 R5	Administration Amendment	APE20180001	2/12/2018	04/01/2018	Name Change	N/A
V-20-017	Title V-Initial	APE20200001	4/27/2020	04/04/2021	Change from State Origin to Title V permit	N/A
V-20-017 R1	Revision	APE20230003	7/26/2024	11/08/2024	Adding a natural gas-fired emergency generator engine	N/A

SECTION 6 – PERMIT APPLICATION HISTORY:

N/A

APPENDIX A – ABBREVIATIONS AND ACRONYMS

- Btu – British thermal unit
- CO – Carbon Monoxide
- Division – Kentucky Division for Air Quality
- GHG – Greenhouse Gas
- HAP – Hazardous Air Pollutant
- HF – Hydrogen Fluoride (Gaseous)
- MSDS – Material Safety Data Sheets
- mmHg – Millimeter of mercury column height
- NO_x – Nitrogen Oxides
- PM – Particulate Matter
- PM₁₀ – Particulate Matter equal to or smaller than 10 micrometers
- PM_{2.5} – Particulate Matter equal to or smaller than 2.5 micrometers
- PTE – Potential to Emit
- SO₂ – Sulfur Dioxide
- TF – Total Fluoride (Particulate & Gaseous)
- VOC – Volatile Organic Compounds

APPENDIX B – INDIRECT HEAT EXCHANGER EMISSION LIMITATIONS

Name	Construction Date	Date Replaced	Capacity <i>MMBtu/hr</i>	Total for Year (T) <i>MMBtu/hr</i>	PM Limit (E _P)* <i>lb/MMBtu</i>	SO ₂ Limit (E _S)** <i>lb/MMBtu</i>
EU01	1991	N/A	10.46	29.24	0.43	1.93
EU02	1991		10.46			
EU03	1991		4.16			
EU04	1991	2014	4.16	29.27	0.43	1.93
EU04	2014	N/A	4.19			

* E_P = 0.9634 (T^{-0.2356})
 ** E_S = 7.7223 (T^{-0.4106})