Commonwealth of Kentucky
Division for Air Quality

STATEMENT OF BASIS / SUMMARY

Title V, Operating
PERMIT ID: V-24-032
Columbia Gulf Transmission, LLC
Stanton Compressor Station
700 Louisiana Street, Suite 700, Houston, TX 77002
November 4, 2024
Durga Patil, Permit Review Branch

Source ID: 21-197-00006
Agency Interest #: 44369
Activity ID: APE20230002

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SECTION 1 - SOURCE DESCRIPTION

SIC Code and description: 4922, Natural Gas Transmission

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

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

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

PTE* greater than 10 tpy for any single hazardous air pollutant (HAP) ☒ Yes ☐ No
If yes, list which pollutant(s): Formaldehyde

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

*PTE does not include self-imposed emission limitations.

Description of Facility:
Columbia Gulf Transmission, LLC owns and operates the Stanton Compressor Station in Stanton, KY. The station receives natural gas via pipeline or from storage facilities and compresses the gas using reciprocating compressor engines and compressor turbines. The compressed gas is then transported via pipeline further along the transmission system.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: V-24-032 Activity: APE20230002

Application Received: 5/9/2023 Application Complete: 11/14/2024

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:

The current application is a renewal of Columbia Gulf Transmission's previous Title V permit, V-18-021 and to include an addition of in-line heater and fuel gas heater submitted earlier along with update to insignificant activity list.

APE20210001: 502(b)(10) Change: This application received February 26, 2021 is for the addition of one (1) 0.33 mmBtu/hr indirect fired line heater (H-4) subject to 40 CFR 63, Subpart DDDDD. The unit is subject to tune-up requirement to be conducted every 5 years according to 40 CFR 63.7540(a)(10)(i) through (vi).

APE20230001: Off-permit change: The application received January 30, 2023 is for updating the permit with a natural gas fired fuel gas heater 0.14 mmBtu/hr that was installed in 2016 but was not identified in the permit. The heater is subject to 40 CFR 63, Subpart DDDDD with tune-up requirement to be conducted every 5 years according to 40 CFR 63.7540(a)(10)(i) through (vi).

V-24-032 Emission Summary				
Pollutant	2023 Actual (tpy)	PTE V-18-021 (tpy)	Change (tpy)	PTE V-24-032 (tpy)
CO	78.63	359.54	0.17	359.71
NOx	158.53	822.59	0.20	822.79
PT	3.32	13.23	0.02	13.25
PM_{10}	3.32	7.71	0.01	7.72
$PM_{2.5}$	3.32	7.71	0.01	7.72
SO_2	0.31	1.199	0.002	1.201
VOC	14.42	69.15	4.9	74.05
Greenhouse Gases				
Carbon Dioxide	51,607	200,359	--	200,359
Methane	0.98	4.65	66.43	71.08
Nitrous Oxide	0.101	0.377	--	0.377
CO_2 Equivalent (CO_2e)		200,588	1,661	202,249

V-24-032 Emission Summary				
Pollutant	2023 Actual (tpy)	PTE V-18-021 (tpy)	Change (tpy)	PTE V-24-032 (tpy)
Hazardous/Toxic Air Pollutants				
Acetaldehyde		0.019	--	0.019
Acrolein		0.0123	--	0.0123
Benzene		0.0014	0.0445	0.0459
Ethyl Benzene		0.0000964	0.0557	0.0558
Formaldehyde	6.18	30.23	--	30.23
Hexane		0.00542	0.148	0.153
Methanol		0.00644	--	0.00644
Naphthalene		0.0000242	--	0.0000242
Toluene		0.00107	0.033	0.034
Xylenes	2.2 E-7	0.000467	0.033	0.0338
Combined HAPs:		30.27	0.32	30.59

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Unit EP0104: Cooper-Bessemer LSV-16 Engines 101, 102, 103, & 104

Initial Construction Date: 1/1955: Engine 101
1/1957: Engines 102, 103, 104

Process Description:

Make/Model:	Cooper-Bessemer LSV-16
Power:	4,840 HP Max / 4,400 HP site rating (each)
Combustion:	4-stroke lean burn
Controls:	High pressure fuel injection

Applicable Regulation:

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. This regulation establishes national emission limitations and operating limitations for HAPs emitted from stationary RICE located at major and area sources of HAP emissions, and requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

401 KAR 51:150, NO_X Requirements for Stationary Internal Combustion Engines. This regulation provides for the regional control of NO_X emissions by establishing requirements for large stationary internal combustion engines.

Comments:

Emission factors from 40 CFR 98 (Carbon Dioxide, Methane, & Nitrous Oxide), test results (CO & NO_X), sulfur content of fuel (SO_2), and AP-42 3.2 (all others).

Initial performance testing conducted: 4/25/2007 for Engines 103 & 104
8/28/2007 for Engines 101 & 102

401 KAR 60:005, Section 2(2)(nnn), 40 C.F.R. 60.630 through 60.636 (Subpart KKK), Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011. This regulation applies to affected facilities in onshore natural gas processing plants. This facility is not a natural gas processing plant as defined in Subpart KKK.

Emission Unit EP06: Pratt & Whitney GC3C-1 Turbine
Initial Construction Date: 1/1968 **Process Description:** Make/Model: Pratt & Whitney GC3C-1 Power: 10,500 HP **Applicable Regulation:** 401 KAR 63:002, Section 2(4)(dddd), 40 C.F.R. 63.6080 through 63.6175, Tables 1 through 7 (Subpart YYYY), National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines. This regulation establishes national emission limitations and operating limitations for HAP emissions form stationary turbines located at major sources of HAP emissions, and requirements to demonstrate initial and continuous compliance with the emission and operating limitations. **Comments:** Emission factors from 40 CFR 98 (Carbon Dioxide, Methane, & Nitrous Oxide), test results (CO & NO_X), sulfur content of fuel (SO_2), and AP-42 3.1 (all others). Existing stationary combustion turbines (constructed before January 14, 2003) in all subcategories do not have to meet the requirements of 40 CFR 63, Subpart YYYY and of subpart A of 40 CFR 63. No initial notification is necessary for any existing stationary combustion turbine, even if a new or reconstructed turbine in the same category would require an initial notification. [40 CFR 63.6090(b)(4)] 401 KAR 60:005, Section 2(2)(nnn), 40 C.F.R. 60.630 through 60.636 (Subpart KKK), Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011. This regulation applies to affected facilities in onshore natural gas processing plants. This facility is not a natural gas processing plant as defined in Subpart KKK.

Emission Unit EP08: Solar Mars 100-T15000S Turbine				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
CO	129 tpy	To preclude 401 KAR 51:017	100.91 lb/mmscf (57.99 tpy) in steady-state, Manufacturer	Recordkeeping
NO_X	0.0197% by volume @ 15% O_2	40 CFR 60.332(a)(2)	139.48 lb/mmscf, Manufacturer	Recordkeeping, Monitoring
SO_2	0.015 % by volume at 15% O_2 and on a dry basis OR Shall not burn any fuel which contains total sulfur in excess of 0.8% by weight (8000ppmw)	40 CFR 60.333(a) or (b)	0.6 lb/mmscf AP-42, Chapter 3.1, Table 3.1-2	Keep on site current tariff sheet specifying the maximum total sulfur content of the fuel

Emission Unit EP08: Solar Mars 100-T15000S Turbine

Initial Construction Date: 8/2001

Process Description:
Make/Model: Solar Mars 100-T15000S
Power: 13,976 HP
Controls: SoLoNOx – lean premix air/fuel & combustion controls

Applicable Regulation:
401 KAR 60:005, Section 2(2)(pp), 40 C.F.R. 60.330 through 60.335 (Subpart GG), Standards of Performance for Stationary Gas Turbines. This regulation applies to all stationary gas turbines with a peak load greater than or equal to 10 mmBtu/hr based on the LHV of the fuel which were constructed, modified, or reconstructed after October 3, 1977.

401 KAR 63:002, Section 2(4)(dddd), 40 C.F.R. 63.6080 through 63.6175, Tables 1 through 7 (Subpart YYYY), National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines. This regulation establishes national emission limitations and operating limitations for HAP emissions form stationary turbines located at major sources of HAP emissions, and requirements to demonstrate initial and continuous compliance with the emission and operating limitations.

Precluded Regulations:
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality. The applicability of 401 KAR 51:017 is precluded by the source taking a synthetic limit on the emissions of Carbon Monoxide from this unit. The emsisions from this unit shall not exceed 129 tpy of CO.

Comments:
Emission factors from 40 CFR 98 (Carbon Dioxide, Methane, & Nitrous Oxide), manufacturer (CO, NO_X, & VOC), sulfur content of fuel (SO_2), and AP-42 3.1 (all others).

The 129 tpy limit on CO is based on comments received from Columbia on December 17, 2007 and the Division's response on Janurary 7, 2008 which addressed the facility's need for the updated limit found in the final permit, V-07-039.

401 KAR 60:005, Section 2(2)(nnn), 40 C.F.R. 60.630 through 60.636 (Subpart KKK), Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011. This regulation applies to affected facilities in onshore natural gas processing plants. This facility is not a natural gas processing plant as defined in Subpart KKK.

Emission Unit EP1G2: Ford LSG-4231-6005-F Emergency Engine

Initial Construction Date: 6/1990

Process Description:
Make/Model: Ford LSG-4231-6005F
Power: 42 HP Max / 38 HP site rating
Combustion: 4-stroke rich burn
Fuel Input: 4.36×10^{-4} MMscf/hr

Applicable Regulation:
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. This regulation establishes national emission limitations and operating limitations for hazardous air pollutants (HAPs) emitted from stationary reciprocating internal combustion engines.

Comments:
Provides emergency power in the event of a commercial power loss.

Emission factors from 40 CFR 98 (Carbon Dioxide, Methane, & Nitrous Oxide), sulfur content of fuel (SO_2), and AP-42 3.2 (all others).

Emission Unit EP1P1: Ford LSG-4231-6007-B Emergency Fire Pump

Initial Construction Date: 6/1992

Process Description:
Make/Model: Ford LSG-4231-6007-B
Power: 52 HP Max / 47 HP site rating
Combustion: 4-stroke rich burn
Fuel Input: 5.40×10^{-4} MMscf/hr

Applicable Regulation:
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. This regulation establishes national emission limitations and operating limitations for hazardous air pollutants (HAPs) emitted from stationary reciprocating internal combustion engines.

Comments:
Provides water for fire suppression in the event of an emergency.

Emission factors from 40 CFR 98 (Carbon Dioxide, Methane, & Nitrous Oxide), sulfur content of fuel (SO_2), and AP-42 3.2 (all others).

Emission Unit EPIG3: Waukesha VGF-P48GL Emergency Engine				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
NO_X	2.0 g/HP-hr or 160 ppmvd @ 15% O_2	40 CFR 60.4233(e) And Table 1 of 40 CFR 60, Subpart JJJJ	2.0 g/HP-hr or 581.35 lb/mmscf, manufacturer	Testing, Maintenance, Recordkeeping
CO	4.0 g/HP-hr or 540 ppmvd @ 15% O_2		1.3 g/HP-hr or 377.88 lb/mmscf, manufacturer	
VOC	1.0 g/HP-hr or 86 ppmvd @ 15% O_2		0.04 g/HP-hr or 11.63 lb/mmscf, manufacturer	

Initial Construction Date: 3/2015

Process Description:
Make/Model: Waukesha VGF-P48GL
Power: 1175 HP
Type: Non-certified 4-stroke lean burn

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. This regulation applies to owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured on or after January 1, 2008 for learn burn engines with a maximum power between 500 HP and 1,350 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. This regulation establishes national emission limitations and operating limitations for HAPs emitted from stationary RICE located at major and area sources of HAP emissions.

Comments:
Provides emergency power in the event of a commercial power loss.

Emission factors from 40 CFR 98 (Nitrous Oxide), manufacturer (CO, NO_X, VOC, Carbon Dioxide, Methane, & Formaldehyde), sulfur content of fuel (SO_2), and AP-42 3.2 (all others).

This engine is not contractually obligated to be available for more than 15 hours per year, therefore 40 CFR 60.4245(e) does not apply.

The source meets the criteria specified in 40 CFR 63.6590(b)(1)(i), and therefore does not have to meet the requirements of 40 CFR 63, Subpart ZZZZ or 40 CFR 63, Subpart A, except for the intial notification requirements of 40 CFR 63.6645(f).

Emission Unit EPBLR1: Natural Gas-Fired 9.5 mmBtu/hr Boiler				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM	0.56 lb/MMBtu	401 KAR 59:015, Section 4(1)(a)	7.6 lb/MMscf, AP-42 Chapter 1.4	Compliance demonstrated by burning natural gas
	20% opacity	401 KAR 59:015, Section 4(2)	N/A	
SO_2	3.0 lb/MMBtu	401 KAR 59:015, Section 5(1)(a)(1)	0.71 lb/MMscf, sulfur content of fuel	

Initial Construction Date: 8/2006

Process Description:
Make/Model: Ajax WRNG-9500
Heat input capacity: 9.5 mmBtu/hr
Fuel: Natural Gas

Applicable Regulation:
401 KAR 63:002, Section 2(4)(iiii), 40 C.F.R. 63.7480 through 63.7575, Tables 1 through 13 (Subpart DDDDD), National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. This regulation establishes national emission limitations and work practice standards for HAPs emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAP, as well as establishing requirements to demonstrate initial and continuous compliance with the emission limitations and work practice standards.

401 KAR 59:015, New Indirect Heat Exchangers, applicable to indirect heat exchangers having a heat input capacity greater than one (1) million BTU per hour (mmBtu/hr) commenced on or after April 9, 1972. This regulation establishes requirements for the emissions from indirect heat exchangers with a heat input capacity of greater than one (1) mmBtu/hr, commenced on or after April 9, 1972.

Comments:
Provides heat for engine jacket water and the compressor building.

Puruant to 40 CFR 63.7495(b), the permittee shall comply with 40 CFR 63, Subpart DDDDD no later than January 31,2016, except as provided in 40 CFR 63.6(i).

Energy assessment completed 5/2015.

Emission factors from 40 CFR 98 (Carbon Dioxide, Methane, & Nitrous Oxide), sulfur content of fuel (SO_2), and AP-42 1.4 (all others).

401 KAR 61:015, Existing Indirect Heat Exchangers. This regulation is not applicable because the emission unit was constructed after April 9, 1972. This regulation establishes requirements for the control of emission from existing indirect heat exchangers with a heat input capacity of greater than one (1) mmBtu/hr commenced before April 9, 1972 and so does not apply to EPBLR1.

Emission Unit EP09: Three (3) Babcock & Wilcox Tank Heaters, One (1) Indirect-Fired Line Heater and One (1) LSV Fuel Gas Heater

Process Description:

Tank heater #1 (HTR1), Tank heater #2 (HTR2) and Tank heater #3 (HTR3)

Make: Babcock & Wilcox
Heat input capacity: 0.125 mmBtu/hr (each)
Fuel: Natural Gas
Construction Date: 1988

Indirect-Fired Line Heater #4 (H4)

Heat Input Capacity: 0.331 MMBtu/hr
Fuel: Natural Gas
Construction Date: 6/1/2021

LSV Fuel Gas Heater #5 (H5)

Make/Model: TECV LC
Heat Input Capacity: 0.140 MMBtu/hr
Fuel: Natural Gas
Construction Date: 6/1/2016

Applicable Regulation:

401 KAR 63:002, Section 2(4)(iiii), 40 C.F.R. 63.7480 through 63.7575, Tables 1 through 13 (Subpart DDDDD), National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

Comments:

Provides heat for various fluid storage tanks at the facility.

Puruant to 40 CFR 63.7495(b), the permittee shall comply with 40 CFR 63, Subpart DDDDD no later than January 31,2016, except as provided in 40 CFR 63.6(i).

Energy assessment completed 5/2015 for the three (3) Tank Heaters (existing per 40 CFR 63, Subpart DDDDD). H4 and H5 are 'new' per 40 CFR 63, Subpart DDDDD and are not subject to this requirement.

Emission factors from 40 CFR 98 (CO2), sulfur content of fuel (SO_2), and AP-42 1.4 (all others).

401 KAR 59:015, New Indirect Heat Exchangers. This regulation establishes requirements for the control of emissions from indirect heat exchangers with a heat input capacity of greater than one (1) mmBtu/hr, commenced on or after April 9, 1972. EP09 is less than one (1) mmBtu/hr.

401 KAR 61:015, Existing Indirect Heat Exchangers. This regulation is not applicable because the emission unit was constructed after April 9, 1972 and is less than one (1) mmBtu/hr. This regulation establishes requirements for the control of emission from existing indirect heat exchangers with a heat input capacity of greater than one (1) mmBtu/hr commenced before April 9, 1972 and does not apply to EP09 due to the heat rating being less than 1 mmBtu/hr and the construction date.

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
EP0104 - #103	High Pressure Fuel Injection	NO_X	401 KAR 51:150	Once per control period	7E & 19	3.0 g/hp-hr	2.1 g/hp-hr	4163 HP	CMN2007002	4/25/2007
#104							1.8 g/hp-hr	4244 HP		
EP0104 - #101	High Pressure Fuel Injection	NO_X	401 KAR 51:150	Once per control period	7E & 19	3.0 g/hp-hr	1.4 g/hp-hr	4345 HP	CMN20070003	8/28/2007
#102							1.4 g/hp-hr	4335 HP		
EP0104 - #101	High Pressure Fuel Injection	NO_X	401 KAR 51:150	Once per control period	ASTM 6522-00	3.0 g/hp-hr	2.4 g/hp-hr	4132 HP	CMN20090001	9/1/2009
#102							2.3 g/hp-hr	4244 HP		
#103							2.2 g/hp-hr	4199 HP		
#104							2.0 g/hp-hr	4271 HP		
EP0104 - #101	High Pressure Fuel Injection	NO_X	401 KAR 51:150	Once per control period	7E	3.0 g/hp-hr	1.3 g/hp-hr	4211 HP	CMN2010001	6/23/2010
#102							2.07 g/hp-hr	4100 HP		
#103							1.71 g/hp-hr	4074 HP		
#104							1.42 g/hp-hr	4206 HP		

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
EP0104 - #101	High Pressure Fuel Injection	NO_X	401 KAR 51:150	Once per control period	7E	3.0 g/hp-hr	0.99 g/hp-hr	4320 HP	CMN20110001	5/17/2011
#102							1.97 g/hp-hr	4357 HP		
#103							1.03 g/hp-hr	4068 HP		
#104							1.49 g/hp-hr	4219 HP		
EP0104 - #101	High Pressure Fuel Injection	NO_X	401 KAR 51:150	Once per control period	7E	3.0 g/hp-hr	0.94 g/hp-hr	4339 HP	CMN20120001	5/15/2012
#102							1.43 g/hp-hr	4203 HP		
#103							1.49 g/hp-hr	4103 HP		
#104							1.35 g/hp-hr	4135 HP		
EP0104 - #101	High Pressure Fuel Injection	NO_X	401 KAR 51:150	Once per control period	7E	3.0 g/hp-hr	1.4 g/hp-hr	4291 HP	CMN20130001	5/29/2013
#102							2.0 g/hp-hr	4106 HP		
#103							1.9 g/hp-hr	4029 HP		
#104							1.3 g/hp-hr	4228 HP		
EP0104 - #101	High Pressure Fuel Injection	NO_X	401 KAR 51:150	Once per control period	7E	3.0 g/hp-hr	1.3 g/hp-hr	4224 HP	CMN20140001	6/18/2014
#102							1.8 g/hp-hr	4136 HP		
#103							0.8 g/hp-hr	4041 HP		
#104							1.7 g/hp-hr	4136 HP		

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
EPIG3	None	NO_X	40 CFR 60, Subpart JJJJ	Initially	7E	160 ppm @ 15% O2	69.15 ppm @ 15% O2	1002 HP	CMN20160001	3/24/2016
		CO			10	540 ppm @ 15% O2	168.12 ppm @ 15% O2			
		VOC			25A	86 ppm @ 15% O2	2.51 ppm @ 15% O2			
EP0104 - #101	High Pressure Fuel Injection	NO_X	401 KAR 51:150	Once per control period	7E	3.0 g/hp-hr	1.03 g/hp-hr	4041 HP	CMN20160002	6/21/2016
#102							1.55 g/hp-hr	4122 HP		
#103							0.94 g/hp-hr	4070 HP		
#104							0.84 g/hp-hr	4239 HP		
EPIG3	None	NO_X	40 CFR 60, Subpart JJJJ	Every 8760 hours or 3 years	7E	160 ppm @ 15% O2	110.34 ppm @ 15% O2	632 HP	CMN20190001	4/17/2019
		CO			10	540 ppm @ 15% O2	167.81 ppm @ 15% O2			
		VOC			25A	86 ppm @ 15% O2	2.71 ppm @ 15% O2			

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
EP0104 - #101	High Pressure Fuel Injection	NO_X	401 KAR 51:150	Once per control period	7E	3.0 g/hp-hr	1.41 g/hp-hr	4354 HP	CMN20210001	6/16/2021
#102							1.27 g/hp-hr	4296HP		
#103							2.49 g/hp-hr	4376 HP		
#104							1.76 g/hp-hr	4364 HP		
EPIG3	None	NO_X	40 CFR 60, Subpart JJJJ	Every 8760 hours or 3 years	7E	160 ppm @ 15% O2	107.5 ppm @ 15% O2	1142 HP	CMN20220001	3/16/2022
		CO			10	540 ppm @ 15% O2	187.8 ppm @ 15% O2			
		VOC			25A	86 ppm @ 15% O2	22.2 ppm @ 15% O2			

Footnotes:

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:
N./A

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 51:150 , NO_X Requirements for Stationary Internal Combustion Engines.	EP0104
401 KAR 59:015, New Indirect Heat Exchangers.	EPBLR1
401 KAR 60:005, Section 2(2)(pp), 40 C.F.R. 60.330 through 60.335 (Subpart GG) Standards of Performance for Stationary Gas Turbines.	EP08
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.	EPIG3
401 KAR 63:002, Section 2(4)(dddd), 40 C.F.R. 63.6080 through 63.6175, Tables 1 through 7 (Subpart YYYY) National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines.	EP06, EP08
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.	EP0104, EP1G2, EP1P1, EPIG3
401 KAR 63:002, Section 2(4)(iiii), 40 C.F.R. 63.7480 through 63.7575, Tables 1 through 13 (Subpart DDDDD) National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.	EPBLR1, EP09

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 51:017 Prevention of Significant Deterioration of Air Quality	EP 08

Table D - Summary of Non Applicable Regulations:
N/A

Air Toxic Analysis
401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances*
The Division for Air Quality (Division) has performed modeling using SCREEN View on November 14, 2023 of potentially hazardous matter or toxic substances (Benzene, Ethyl Benzene Hexane; N-Hexane, Toluene and Xylenes (Total)) 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
G-04-001	Renewal	APE20040001	11/8/2004	7/14/2005	Renewal	N/A
G-04-001	Off-Permit Change	APE20060001	7/5/2006	7/7/2006	Replacement of existing boiler	N/A
V-07-039	Sig. Revision	APE20070002	9/16/2007	3/13/2008	Corrected low temperature emissions for Solar Mars Turbine (EP08)	Updated Syn. Minor
V-12-048	Renewal	APE20120001	10/16/2012	10/7/2013	Renewal	N/A
V-12-048 R1	Minor Revision	APE20140002	2/3/2015	6/11/2015	Addition of new emergency generator	N/A
V-12-048 R1	502(b)(10) Change	APE20160001	6/13/2015	7/12/2016	Parametric monitoring for NOx SIP Call Compliance Plan	N/A
V-18-021	Renewal	APE20180001	5/29/2018	11/18/2018	Renewal of Permit	

SECTION 6 – PERMIT APPLICATION HISTORY:

None.

APPENDIX A – ABBREVIATIONS AND ACRONYMS

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