

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

Conditional Major, Construction/Operating
Permit: F-25-033

Safran Landing Systems Kentucky, LLC
One Carbon Way
Walton, KY 41094

September 11, 2026
Babak Fakharpour, Reviewer

SOURCE ID:	21-015-00125
AGENCY INTEREST:	137
ACTIVITY:	APE20170005; APE20180004

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SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 3728, Aircraft Parts and Auxiliary Equipment

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: Boone

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): HCN

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

*PTE does not include self-imposed emission limitations.

Description of Facility:

Safran Landing Systems Kentucky, LLC, manufactures aircraft brake pads using carbon vapor infiltration (CVI) for depositing graphite on a prepared carbon substrate. A substrate felting process uses pre-oxidized acrylonitrile fiber to make brake pad pre-forms. The resulting brake pads are initially carbonized in a two-stage process (primary and secondary carbonization) in separate high temperature carbonizing reactors. The initial stage (reactor) vents to a thermal oxidizer. The brake pads are then placed in high temperature CVI reactors for the carbonization process, where a mixture of propane and natural gas is circulated for an extended period of time. The reactor exhaust is through a steam vacuum ejector/barometric condenser system with non-condensable hydrocarbon gases being burned in a boiler to produce steam for the process. Cooling towers re-circulate contact cooling water to the process and emergency generators are available for orderly shutdown of the reactors in case of power failure. The facility also has emergency diesel engines for use in the event of power failures and emergency diesel fire pumps for the cooling towers.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: F-25-033

Activities: APE20170005; APE20180004

Received: 12/4/2017; 5/17/2018

Application Complete Date(s): 2/20/2018; 10/24/2018

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

Construction/Modification Requested? ☒ Yes ☐ No

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

- *APE20180001 – Section 502(b)(10) Change:* Replacement of control device parts (pilots/igniters) on Thermal Oxidizer #1 (EU 20).
- *APE20180002 – Section 502(b)(10) Change:* Addition of an Electric Curing Oven (802) and a Nitrogen Scrubber to the Section C of the permit (Insignificant Activities).

Description of Action:

The following bullets capture the requested changes in each application.

- *APE20170005* – On December 4, 2017, Safran submitted a Minor Revision application for the addition of Final Machining Line 6 (controlled by a baghouse), Installing one (1) Electric Vacuum Annealing Furnace (703), and expanding Needling/Cut Fiber (Preform). The Refurbishment Center (RFPC) which includes several emission units (EU 05, EU 06, EU 17, EU 18, EU 19 EP 07A, one Electric Curing Oven (801), Anti-Oxidant Coating (A123), two Electric Vacuum Annealing Furnaces (701 & 702), Nitrogen Scrubber (701 & 702), Anti-Oxidant Coating and curing (A66), A123 Residual Scraping (RFPC), RFPC Inspection Process, Finished Disc Coating and Drying with Oven, Refurbishing, and De-riveting) was moved into a new building.
- *APE20180004* – On May 17, 2018, Safran submitted a permit renewal application. The Division requested additional information regarding the renewal application on July 27, 2018, and Safran submitted the requested information on October 24, 2018. The Division requested additional information regarding the NOD response on March 6, 2024; July 22, 2024; and January 6, and January 22, 2025. Safran submitted the requested information on April 1, 2024; May 7, 2024; and January 27, 2025. Additional information for the renewal application was submitted by Safran in follow-up submittals on July 2, July 19, and December 5, 10, and 18, 2024, as well as January 17, April 2, April 16, October 23, November 19, December 11, 2025, January 29, 2026, May 22, 2026, June 17, 2026, August 26, 2026, and September 4, 2026.

Overall, this permit renewal includes the following changes:

- Permit language, such as applicable regulations, operating limitations, compliance demonstration methods, testing requirements, etc., has been updated or added to be consistent and clear.
- Where multiple similar units exist, they have been grouped as emission points within an emission unit (e.g. EP02F is an emission point within EU 02, the Carbonizing Reactors). Where the term “emission point” or “EP” is used, it refers to a single process or unit. Where the term “emission unit” or “EU” is used, it refers to a group of similar emission points.
- The Anodizing Boiler #4 has been renamed as W&B boiler, and given the identifier EP 01. This unit is otherwise unchanged/unmodified.

- The term “Furnace” used previously for various operations at the facility has been replaced with the term “Reactor” to better describe the process. The term “Furnace” denotes the burning, charring or even melting of a material, and this is not the case at this site. Instead, Safran creates chemical and/or molecular reactions in the vessels using very high temperatures (using electricity, not fuel) as the reaction catalyst.
- With respect to the CVI reactor start-up venting previously described in Section B, Emission Unit 02 (02), venting of the natural gas-propane process gas mix is no longer expected under normal operation. When emission from start-up were first calculated for the site’s original air permit application, it was done by calculating the “worst possible instance.” The previous calculation assumed that all of the process gas that was passed through the furnace during the start-up step (that has the system open to the atmosphere) was allowed to escape the system. For this air permit renewal application, however, Safran performed the calculation again, but this time more accurate information was used to make the calculation:
 - The volume of the furnace and piping was taken into account;
 - The ramping-up flowrate of the process gas was used instead of assuming 100% process gas flows from the start; and
 - The total time that the system is open to the air was observed from the site’s equipment software (12 seconds) and used in the calculation instead of using the entire start-up step time.

With these three changes, the results showed that not enough process gas is passed through the system at the cycle start to reach the vent before the vent is switched off. From this, it was proven that no process gas is released during any CVI furnace start-up, so this process was removed as a potential source of emissions.

- Carbonizing Reactors (EU 02): Hydrogen cyanide (HCN) is regulated as a hazardous air pollutant (HAP) under Section 112 of the Clean Air Act and 401 KAR 63:020. However, there are no federal or state short-term ambient air quality standards applicable to HCN. The previous lb/hr limits were included to provide an additional margin of assurance for short-term exposure compliance, but updated modeling and compliance demonstrations confirm that such limits are not required. Additionally, it is also difficult to test these sources and receive results above the detection limit for the tests. Therefore, based on the information provided, the lb/hr limits have been removed. The source-wide limit of 0.7 tons per year remains unchanged, ensuring continued compliance with hazardous air pollutant thresholds and maintaining protection of public health and the environment.
- Previously, the contact Cooling Towers were unknown sources of VOC HAP. Safran conducted testing of the water sent to the cooling towers to be evaporated, assuming all the volatile HAP is released to the atmosphere. Due to the results of air dispersion modeling conducted for 401 KAR 63:020, a Naphthalene emission limit of 0.688 ton per year has been added to the permit. To meet this limit, Safran will need to install a water reuse system that will reduce the loading of naphthalene/VOC’s in the cooling water that makes it to the condensate towers. A Compliance Schedule for installing this system and therefore controlling Naphthalene released to the atmosphere has been included in Section I of the permit.
- Table 1, below, summarizes changes to previously permitted maximum rated heat input capacity/engine size/process rates, and the emission points that have been removed from the permit:

Table 1 – Changes to Emission Points/Units

EP/ EU#	Original Max Capacity	Revised Max Capacity	Removed EP/EU
EP 03A, 03B	27.8 MMBtu/hr each	32.658 MMBtu/hr each	NA
EP 03C	27.8 MMBtu/hr	31.434 MMBtu/hr	NA
EP 01	1.6269 MMBtu/hr	1.595 MMBtu/hr	NA
*EU 02	NA	NA	18 Infiltration Furnaces
EP 005	NA	NA	Intermediate Machining #3
EU 06	NA	NA	Finishing Machines 1&2
EP 017	269 ton/yr	65 ton/yr	NA
EP 18	955 ton/yr	569 ton/yr	NA
EP 19	955 ton/yr	1,331 ton/yr	NA
EP 07A	836 HP	939 HP	NA

*The effluent gas stream generated by infiltration reactors is directed to and consumed by the boilers; consequently, the boiler stacks will constitute the primary point of emissions. Note: In the previous permit, EU 02 was designated as the infiltration furnaces. In this renewal, EU 02 has been redefined to represent carbonizing reactors. This update reflects the current configuration of the facility and the current identifiers in the Ky Emissions Inventory System and ensures that the permit accurately identifies the emission sources.

- Table 2, below, summarizes the proposed additional emission points to be added to the permit:

Table 2 – Added Emission Points

EP/EU #	Title	Max. Cap.	Control Equipment
02H	Carbonizing Reactor 494	0.0017 tons/hr	Thermal Oxidizer #4
EP 24	Final Machining #6	0.152 tons/hr	Baghouse (DC-5)
EP 23	A-360 Spray Booth	300 discs/hr (26.4 lb coating/hr)	HEPA Filter

- The numbering for each emission point in the permit has been updated or corrected to reflect the numbering/identifiers in the Ky Emissions Inventory System.

F-25-033 Emission Summary			
Pollutant	2025 Actual (tpy)	PTE F-25-033 (tpy) ¹	Allowable (tpy)
CO	38.16	95.8	
NO _x	28.43	87.8	
PT ²	92.18	6.4	
PM ₁₀	89.40	11.9	
PM _{2.5}	40.63	10.6	
SO ₂	0.27	2.0	
VOC	23.53	23.7	<90
Lead	-	0.00004	
Greenhouse Gases (GHGs)			
Carbon Dioxide	53,129	124,461	

F-25-033 Emission Summary			
Pollutant	2025 Actual (tpy)	PTE F-25-033 (tpy) ¹	Allowable (tpy)
Methane	1.02	4.78	
Nitrous Oxide	0.98	2.63	
CO ₂ Equivalent (CO ₂ e)	53,417	125,292	
Hazardous Air Pollutants (HAPs)			
Acenaphthylene	- ³	1.38	
Chromium & Chromium Compounds	- ³	4.86	
Hexane; N-Hexane	- ³	1.94	
Hydrogen Cyanide	0.000013	0.00003	<0.7
Methyl Isobutyl Ketone	- ³	1.87	
Naphthalene	- ³	1.30 ⁴	<0.688
Toluene	- ³	0.97	
Xylenes	- ³	1.76	
Combined HAPs:	0.000013	15.67	<22.5

¹Note: The PTE listed is the controlled PTE due to federally enforceable control devices.

²Note: PT includes only filterable PM; PM₁₀ and PM_{2.5} includes both filterable and condensable PM.

³Note: These pollutants are not currently tracked in the Ky Emissions Inventory System (KYEIS)

⁴Note: The current potential of Naphthalene exceeds the limit established for compliance with 401 KAR 63:020. With the installation of the water treatment system and meeting the requirements of the compliance schedule in Section I, the potential and actual emissions will be below the limit.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Group 1: Indirect Heat Exchangers					
Pollutant	Emission Limit or Standard		Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	03A	0.42 lb/MMBtu	401 KAR 59:015, Section 4(1)(c)	1.9 lb/MMscf; AP-42 Chapter 1.4	Assumed based upon natural gas and NGE combustion
	03B	0.36 lb/MMBtu			
	03C	0.33 lb/MMBtu			
	03D	0.28 lb/MMBtu			
	03E				
	01	0.36 lb/MMBtu			
Opacity	20% opacity		401 KAR 59:015, Section 4(2)	N/A	Assumed based upon natural gas and NGE combustion
SO ₂	03A	1.85 lb/MMBtu	401 KAR 59:015, Section 5(1)	0.6 lb/MMscf; AP-42 Chapter 1.4	Assumed based upon natural gas and NGE combustion
	03B	1.39 lb/MMBtu			
	03C	1.17 lb/MMBtu			
	03D	0.92 lb/MMBtu			
	03E				
	01	1.37 lb/MMBtu			
Initial Construction Dates: EP 03A (1999), EP 03B (2000), EP 01 (2007), EP 03C (2012), EP 03D & EP 03E (2017)					
Process Description:					
Emission Point #	Unit Name	Burner Maximum Capacity	Fuel Used	Control Device	
03A	Boiler #1 (Cleaver brooks)	32.658 MMBtu/hr	NGE from CVI & Natural Gas	Low NOx Burners	
03B	Boiler #2 (Cleaver brooks)	32.658 MMBtu/hr	NGE from CVI & Natural Gas	Low NOx Burners	
03C	Boiler #3 (Cleaver brooks)	31.434 MMBtu/hr	NGE from CVI & Natural Gas	Low NOx Burners	
03D	Boiler #4 (Cleaver Brooks)	40.823 MMBtu/hr	NGE from CVI & Natural Gas	Low NOx Burners	
03E	Boiler #5 (Cleaver Brooks)	40.823 MMBtu/hr	NGE from CVI & Natural Gas	Low NOx Burners	
Boilers 03A through 03E burn natural gas and natural gas effluent (NGE) as process fuel. The NGE is a process off-gas produced by the Carbon Vapor Infiltration (CVI) production process, which includes 18 CVI reactors. The NGE produced by a single CVI reactor can be utilized as fuel in any of the five boilers, and steam produced by any of the boilers may be used in any of the vacuum towers to create vacuum for any of the CVI reactors. All emissions released to the atmosphere by the CVI process are produced by the boilers combusting either natural gas or NGE. NGE is created in the CVI furnaces when natural gas and propane are injected into the CVI's to make the carbon discs denser. The molecular bonds of the natural gas and propane are broken, and the carbon molecules impregnate the disc. The gases reform into NGE					

Group 1: Indirect Heat Exchangers

and are vented to a mixing tank where additional natural gas may be added before being sent to the boilers as fuel.

Emission Point #	Unit Name	Burner Maximum Capacity	Fuel Used	Control Device
01	W&B Boiler (Fulton)	1.595 MMBtu/hr	Natural Gas	Low NOx Burners

The Wheel and Brake (W&B) Boiler provides steam to the W&B facility and is not part of a CVI process arrangement.

Applicable Regulations:

401 KAR 59:015, *New indirect heat exchangers*, applies to each indirect heat exchanger having a heat input capacity greater than one (1) million BTU per hour (MMBTU/hr) commenced on or after April 9, 1972.

401 KAR 60:005, Section 2(2)(d), 40 C.F.R. 60.40c through 60.48c (Subpart Dc), *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, applies to each steam generating unit for which construction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h). Applies to EP 03A, 03B, 03C, 03D, & 03E.

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 matter or toxic substances, provided such emissions are not elsewhere subject to the provisions of the administrative regulations of the Division for Air Quality.

Comments:

Emissions calculated using AP-42, Chapter 1.4 and 40 CFR 98, Subpart C. Allowable emissions for the units are calculated using 401 KAR 59:015, Section 3(1) using the total rated heat input capacity of all affected facilities (See Appendix B).

Group 2: Carbonizing					
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis		Compliance Method
Opacity	20% opacity	401 KAR 59:010, Section 3(1)(a)	N/A		Weekly qualitative observations; monitoring; recordkeeping
PM	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	AP-42 Chapter 1.4		Assumed based on PTE and OM&M Plan
HCN	0.7 tons/yr, combined	401 KAR 63:020	02A & 02B	247.7 lb/ton; Testing	Operating Limitations; Testing; Monitoring; Recordkeeping, Control Equipment operating Conditions
			02C	371.5 lb/ton; Testing	
			02D, 02E, 02F, 02G, & 02H	14.2 lb/ton; Testing	
Initial Construction Dates: EP 02A, 02B & 02D (2000), EP 02E (2013), EP 02C, 02F, & 02G (2018), EP 02H (2025)					
Process Description: This emission unit consists of eight (8) electric carbonizing reactors in which chemical and/or molecular reactions occur at high temperatures using electricity as the reaction catalyst. Parts requiring initial and/or secondary carbonization are carbonized in these reactors. The output rate of carbonized brake pre-forms is approximately 1448 ton/yr combined.					
EP 02A: Carbonizing Reactor 441 (Primary Carbonization) Maximum Capacity: 0.037 tons/hr Maximum Capacity: 30 Hours/batch Control Equipment: Thermal Oxidizer #1 (99.99979% control efficiency)					
EP 02B: Carbonizing Reactor 442 (Primary Carbonization) Maximum Capacity: 0.037 tons/hr Maximum Capacity: 30 Hours/batch Control Equipment: Thermal Oxidizer #3 (99.99979% control efficiency)					
EP 02C: Carbonizing Reactor 443 (Primary Carbonization) Maximum Capacity: 0.056 tons/hr Maximum Capacity: 30 Hours/batch Control Equipment: Thermal Oxidizer #4 (99.99979% control efficiency)					
EP 02D: Carbonizing Reactor 490 (Secondary Carbonization) Maximum Capacity: 0.017 tons/hr Maximum Capacity: 84 Hours/batch Control Equipment: Thermal Oxidizer #2 (99.99979% control efficiency)					
EP 02E: Carbonizing Reactor 491 (Secondary Carbonization) Maximum Capacity: 0.017 tons/hr Maximum Capacity: 84 Hours/batch					

Group 2: Carbonizing

Control Equipment: Thermal Oxidizer #2 (99.99979% control efficiency)

EP 02F: Carbonizing Reactor 492 (Secondary Carbonization)

Maximum Capacity: 0.017 tons/hr

Maximum Capacity: 84 Hours/batch

Control Equipment: Thermal Oxidizer #4 (99.99979% control efficiency)

EP 02G: Carbonizing Reactor 493 (Secondary Carbonization)

Maximum Capacity: 0.017 tons/hr

Maximum Capacity: 84 Hours/batch

Control Equipment: Thermal Oxidizer #4 (99.99979% control efficiency)

EP 02H: Carbonizing Reactor 494 (Secondary Carbonization)

Maximum Capacity: 0.017 tons/hr

Maximum Capacity: 84 Hours/batch

Control Equipment: Thermal Oxidizer #4 (99.99979% control efficiency)

Burner Capacity for Thermal Oxidizer #1: 4.49 MMBtu/hr

Burner Capacity for Thermal Oxidizer #2: 5.25 MMBtu/hr

Burner Capacity for Thermal Oxidizer #3: 2.04 MMBtu/hr

Burner Capacity for Thermal Oxidizer #4: 6.63 MMBtu/hr

Applicable Regulation:

401 KAR 59:010, *New process operations*, applies to each affected facility or source, associated with a process operation, which is not subject to another emission standard with respect to particulates in 401 KAR 59, commenced on or after July 2, 1975.

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 matter or toxic substances, provided such emissions are not elsewhere subject to the provisions of the administrative regulations of the Division for Air Quality.

Comments:

Maximum production rate was calculated utilizing the facility provided lb/batch and the hours per batch.

Note: HCN emission factor for EU 02 are based on stack testing in 2008 (reactor 441) on thermal oxidizer #1 and 2014 (reactors 442 & 491) on thermal oxidizer #3. The emission factor for HCN was calculated based on detection limit because all samples were non-detect. Reactors are different sizes.

Group 3: Cooling Towers					
Pollutant	Emission Limit or Standard		Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
Opacity	20%		401 KAR 59:010, Section 3(1)(a)	N/A	Weekly Qualitative Monitoring, Recordkeeping
PM	- P<0.5; E = 2.34 - P≤30; E=3.59P^{0.62} - P>30; E= 17.3P^{0.16}		401 KAR 59:010, Section 3(2)	(water circulation rates)*(TDS)* drift rate of 0.002%	Assumed based on the potential to emit
Naphthalene	EP 04A & EP 04B	0.688 ton/yr	401 KAR 63:020	Water sampling	Testing, Monitoring, Recordkeeping, and meeting compliance schedule requirements

Initial Construction Dates:

EP 04A (2018); EP 04B (1998 & 2012); EP 04C (2012); EP 04D (1998); EP 04E (2012), & EP 04F (2018)

Process Description:

Emission Unit 04 (EU 04) – Cooling Tower Systems:

Cooling tower systems are used to provide the required cooling capacity for the facility. Contact cooling towers use water that comes in direct contact with the equipment they are cooling, non-contact cooling towers have closed loop systems that do not allow for direct contact.

Emission Point	Unit Name	Cells	Maximum Capacity (gal/hr)	Drift Loss	Control Device
04A	Main Plant Cooling Tower #3 (Contact)	3A	116,520	0.002%	Mist Eliminator; Water Reuse System ¹
		3B	116,520		
		3C	116,520		
		3D	116,520		
		3E	116,520		
04B	Condensate Tower #1 (Contact)	1A	45,660		
		1B	45,660		
	Condensate Tower #2 (Contact)	2A	30,000		
		2B	30,000		
		2C	30,000		
	Condensate Tower #3 (Contact)	3A	39,600		
		3B	39,600		
		3C	39,600		
04C	Accelerated Cooling Tower (Non-Contact)	1	42,900	0.002%	Mist Eliminator
		2	42,900		

Group 3: Cooling Towers

04D	Main Plant Cooling Tower #1 (Non-Contact)	1A	67,980	0.002%	Mist Eliminator
		1B	67,980		
		1C	67,980		
04E	Main Plant Cooling Tower #2 (Non-Contact)	2A	40,800	0.002%	Mist Eliminator
		2B	40,800		
04F	RFPC Cooling Tower (Non-Contact)	1	67,800	0.002%	Mist Eliminator
		2	67,800		

¹Note: The Water Reuse System is not a control device installed on the stack. It is instead installed on the process water loop such that it reduces contaminants in the cooling water, and therefore emissions.

Applicable Regulations:

401 KAR 59:010, *New process operations*, applies to each affected facility or source, associated with a process operation, which is not subject to another emission standard with respect to particulates in 401 KAR 59, commenced on or after July 2, 1975.

State-Origin Requirements:

401 KAR 63:020, *Potentially hazardous matter or toxic substances*, applies to each affected facility which emits or may emit potentially hazardous matter or toxic substances, provided such emissions are not elsewhere subject to the provisions of the administrative regulations of the Division for Air Quality. Applies to EP 04A & 04B.

Precluded Regulations:

401 KAR 63:002, Section 2(4)(j), 40 C.F.R. 63.400 through 63.407, Table 1 (Subpart Q), *National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers*, precluded by prohibiting the use of chromium-based water treatment chemicals in the cooling towers.

Comments:

All cooling towers are equipped with mist eliminators designed to minimize drift losses and emission calculations are based on a technical paper about calculating particulates from cooling towers by Reisman and Frisbie. ("*Calculating Realistic PM₁₀ Emissions From Cooling Towers*." Reisman-Frisbie. Environmental Progress 21 (July 2002)).

Note: The TDS, VOC, and HAP values for the cooling towers were sampled and analyzed by Safran, since these emissions function of the drift rate, circulating water flow rate of the cooling tower and the TDS in the circulating water.

Group 4: Machining					
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis		Compliance Method
Opacity	20%	401 KAR 59:010, Section 3(1)(a)	N/A		Assumed when the baghouses are properly operated, monitoring, recordkeeping
PM	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	EU 017	731.8 lb/ton; Mass balance	Assumed when the baghouses are properly operated, monitoring, recordkeeping
			EU 18	613.4 lb/ton; Mass balance	
			EU 19	613.4 lb/ton; Mass balance	
			EU 24	613.4 lb/ton; Mass balance	
Initial Construction Dates: EU 17 (2015); EU 18 (2014); EU 19 (2017); EU 24 (2025)					
Process Description:					
Emission Point 017 Refurbishing Machines Center – Mazak #1, #2, and #3 (RFPC)					
<u>Description:</u> This emission point will take used brake discs that are received from the field and re-machine the wear surfaces to current specifications. The output of the baghouse is vented back into the production building.					
Maximum Capacity: 65 tons of brake discs/yr, total					
Construction Commenced for Machine #1: 4/2002					
Construction Commenced for Machine #2: 8/2008					
Construction Commenced for Machine #3: 10/2015					
Control Equipment: Baghouse (DC-3)					
Emission Point 18 Final Machining #4					
<u>Description:</u> This emission point processes carbon discs into usable friction surface brake discs. The output of the baghouse is vented to the atmosphere near the southwest corner of Carbon Building 1.					
Maximum Capacity: 569 tons of brake discs/yr					
Control Equipment: Baghouse (DC-1)					
Emission Point 19 Final Machining #5					
<u>Description:</u> This emission point processes carbon discs into usable friction surface brake discs. The output of the baghouse is vented back into the production building.					
Maximum Capacity: 1,331 tons/yr					
Control Equipment: Baghouse (DC-4)					
Emission Point 24 Final Machining #6					
<u>Description:</u> This emission point processes carbon discs into usable friction surface brake discs. The output of the baghouse is vented back into the production building.					
Maximum Capacity: 1,331 tons/yr					

Group 4: Machining

Control Equipment: Baghouse (DC-5)

Applicable Regulation:

401 KAR 59:010, *New process operations*, applies to each affected facility or source, associated with a process operation, which is not subject to another emission standard with respect to particulates in 401 KAR 59, commenced on or after July 2, 1975.

Comments:

Machining in this group are controlled by baghouse/hepa filter that emits inside the building. Emissions calculated using mass balance.

Group 5: Paint Lines				
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
Opacity	20%	401 KAR 59:010, Section 3(1)(a)	N/A	Weekly Qualitative Monitoring, Recordkeeping
PM	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	Material Balance & SDS	Dry Filters, 98.65% C.E., Manufacturer's guarantee (filter efficiency data provided by filter vendors)

Initial Construction Date: 5/1/2007

Process Description:

Emission Point #	Unit Name	Maximum Capacity	Control Device
08A	Paint Line #1 (Primer), W&B paint mixing Room, & electrically heated oven	0.16 gal/hr	Fabric Filter
08B	Paint Line #2 (Top-coat), W&B paint mixing Room & electrically heated oven	0.264 gal/hr	Fabric Filter

Maximum total solvent application rate for both lines is 0.089 gal/hr.

Applicable Regulation:
401 KAR 59:010, *New process operations*, applies to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.

401 KAR 63:002, Section 2(4)(iiiiii), 40 CFR 63.11169 through 63.11180, Table 1 (Subpart HHHHHH), *National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources*, applies at an area source of HAP, if the permittee performs spray application of coatings that contain the target HAP, as defined in 40 CFR 63.11180. Under this subpart, these emission points are considered existing sources.

Comments:
Emission factors for this unit were determined based on the MSDS for the paint used. A material balance was used to calculate the emission factors for each component of the paints by using the max throughput and the max pollutant containing material possible in the paint mixtures. The paints currently used in this process do contain the target HAP compounds (Strontium Chromate and Barium Chromate) in 40 CFR 63, Subpart HHHHHH. The filter equipped to the booth provides greater than 98% control efficiency for particulate matter and metal HAPs. The mixing room is shared by the paint lines and exhausts to the same control device.

Group 6: New Emergency Fire Pump Engines					
Pollutant	Emission Limit or Standard		Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
NMHC + NO _x	EP 008B, EP 008C, & EP 008D	7.8 g/HP-hr	40 CFR 60.4205(c)	AP-42, Table 3.4-1 and 2	Certified Engine, Monitoring, Recordkeeping, Reporting
PM	EP 008B, EP 008C, & EP 008D	0.22 g/HP-hr	40 CFR 60.4205(c)		
CO	EP 008B, EP 008C, & EP 008D	3.7 g/HP-hr	40 CFR 60.4205(c)		
Initial Construction Dates: EP 008C & EP 008D (2018), EP 008B (2012)					
Process Description: <i>Emission Unit 008 (EU 008) – Emergency Fire Pump Engines</i>					
EP 008B - Emergency Fire Pump Engine #2: A 4-stroke compression ignition engine that has a displacement of less than 10 liters per cylinder. Model: John Deere 4045TF285 Maximum Rating: 121 HP Total Displacement: 4.5 liters Number of Cylinders: 4 Manufacture Date: 2012 Model Year: 2012 Fuel: Diesel Control Equipment: None					
EP 008C - Emergency Fire Pump Engine #3: A 4-stroke compression ignition engine that has a displacement of less than 10 liters per cylinder. Model: John Deere PE4045 Maximum Rating: 156 HP Total Displacement: 4.5 liters Manufacture Date: 2017 Model Year: 2017 Fuel: Diesel Control Equipment: None					
EP 008D - Emergency Fire Pump Engine #4: A 4-stroke compression ignition engine that has a displacement of less than 10 liters per cylinder. Model: John Deere PE4045 Maximum Rating: 156 HP Total Displacement: 4.5 liters Manufacture Date: 2017 Model Year: 2017 Fuel: Diesel Control Equipment: None					
Applicable Regulations: 401 KAR 60:005, Section 2(2)(oooo), 40 C.F.R. 60.4200 through 60.4219, Tables 1 through 8 (Subpart IIII), <i>Standards of Performance for Stationary Compression Ignition Internal Combustion Engines</i> , applies to owners and operators of stationary compression ignition (CI) internal combustion engines					

Group 6: New Emergency Fire Pump Engines

(ICE) and other persons as specified in 40 CFR 60.4200(a)(1) through (4). For the purposes of 40 CFR 60, Subpart IIII, the date that construction commences is the date the engine is ordered by the owner or operator.

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 Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, applies to each stationary RICE located at a major or area source of HAP emissions.

Comments:

Emission calculations based on AP-42, Section 3.4, 40 CFR 98, Subpart C, and emission standards from 40 CFR 60, Subpart IIII. Emission calculations are based on an assumption of 500 hrs/yr to be conservative and account for emergency operation.

Group 7: Existing Emergency Stationary RICE

Initial Construction Dates: EP 07A (2000), EP 07C (2003), EP 008A (2018)

Process Description:

Emission Unit 07 (EU 07) – Emergency Generators

EP 07A - Emergency Generator Unit #1: A 4-stroke compression ignition engine that has a displacement of less than 10 liters per cylinder.

Model: Caterpillar 3412
Maximum Rating: 939 HP
Total Displacement: 27.02 liters
Number of Cylinders: 12
Manufacture Date: 1999
Model Year: 1999
Fuel: Diesel
Control Equipment: None

EP 07C - Emergency Generator Unit #3: A 4-stroke spark ignition engine that has a displacement of less than 10 liters per cylinder.

Model: Ford WSG6106816005E-NA
Maximum Rating: 160 HP
Total Displacement: 6.8 liters
Number of Cylinders: 10
Manufacture Date: 2003
Model Year: 2003
Fuel: Natural Gas
Control Equipment: None

Emission Unit 008 (EU 008) – Emergency Fire Pump Engines

EP 008A - Emergency Fire Pump Engine #1: A 4-stroke compression ignition engine that has a displacement of less than 10 liters per cylinder.

Model: John Deere 6068TF250
Maximum Rating: 178 HP
Total Displacement: 6.8 liters
Number of Cylinders: 6
Manufacture Date: 2000
Model Year: 1999
Fuel: Diesel
Control Equipment: None

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 Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, applies to each stationary RICE located at a major or area source of HAP emissions.

Comments:

Emissions are calculated using emission factors from AP-42 Tables 3.2-1, 3.2-2, 3.4-1, 3.4-2, 3.4-3 and 40 CFR 98 Tables C-1 and C-2, and an assumption of 500 hrs/yr to be conservative and account for emergency operation.

Emission Point 07B - Emergency Generator Unit #2

Initial Construction Date: 2011

Process Description:

EP 07B - Emergency Generator Unit #2, A 4-stroke compression ignition engine that has a displacement of less than 10 liters per cylinder.

Model: Caterpillar C32

Maximum Rating: 1474 HP

Total Displacement: 32.1 liters

Number of Cylinders: 12

Manufacture date: 2012

Model Year: 2012

Fuel: Diesel

Control Equipment: None

Applicable Regulation:

401 KAR 60:005, Section 2(2)(oooo), 40 C.F.R. 60.4200 through 60.4219, Tables 1 through 8 (Subpart IIII), *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, applies to owners and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in 40 CFR 60.4200(a)(1) through (4). For the purposes of 40 CFR 60, Subpart IIII, the date that construction commences is the date the engine is ordered by the owner or operator.

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 Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, applies to each stationary RICE located at a major or area source of HAP emissions.

Comments:

Emissions are calculated using emission factors from AP-42 Tables 3.4-1, 3.4-2, 3.4-3 and 40 CFR 98 Tables C-1 and C-2, and an assumption of 500 hrs/yr to be conservative and account for emergency operation.

Emission Point 07D - Emergency Generator Unit #4

Initial Construction Date: 2007

Process Description:

EP 07D - Emergency Generator Unit #4: A 4-stroke spark ignition engine that has a displacement of less than 10 liters per cylinder.

Model: General Motors 8.ILT

Maximum Rating: 225 HP

Total Displacement: 8.1 liters

Number of Cylinders: 8

Manufacture date: 2007

Model Year: 2007

Fuel: Natural Gas

Control Equipment: None

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 Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, applies to each stationary RICE located at a major or area source of HAP emissions. Under this subpart, this is considered a “new” engine.

Comments:

Emissions are calculated using emission factors from AP-42 Tables 3.2-1, 3.2-2, and 40 CFR 98 Tables C-1 and C-2, and an assumption of 500 hrs/yr to be conservative and account for emergency operation.

Emission Unit 23: A360 Spray Booth				
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
Opacity	20%	401 KAR 59:010, Section 3(1)(a)	N/A	Assumed when controls are properly operated.
PM	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	Material Balance & MSDS with 50% Transfer Efficiency	Assumed when controls are properly operated.
Initial Construction Date: 2027 Process Description: This emission point consists of a mix kitchen and a spray booth applying A360 coating (a proprietary non-HAP, non-VOC anti-oxidant coating) to aircraft brake discs. Maximum Capacity: 300 discs/hr (26.4 lb/hr of coating applied) Control Equipment: HEPA Filter (venting inside the building) Applicable Regulation: 401 KAR 59:010 , <i>New process operations</i> , applies to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975. Comments: Emission factors (546 lb/ton for PT, PM ₁₀ , and PM _{2.5}) for this unit were determined based on the information provided by the applicant and engineering estimates (27.30% solids content and 50% transfer efficiency), a control efficiency of 99.99% and capture efficiency of 100%. The coating is a proprietary non-HAP, non-VOC anti-oxidant coating and is therefore not subject to any surface coating specific regulations. For the A360 system, brake parts/discs will be fed into the booths where the new coating will be manually applied. The coating does not dry but will be cured in existing ovens. Particle emissions from overspray will be controlled through the use of a HEPA filter venting inside the building.				

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
02A	TO #1	HCN	401 KAR 63:020	Every 5 years	Method OTM-29	5.96E-9 ¹	6.6E-5	Full carbonization load	CMN20180001	12/12/2018
02D, and 02E	Inlet of TO #2	HCN	401 KAR 63:020	Every 5 years	Method OTM-29	NA	0.099 ²	Full carbonization load	CMN20190001	7/17/2019
02B	Inlet of TO #3	HCN	401 KAR 63:020	Every 5 years	Method OTM-29	NA	33.653 ²	Full carbonization load	CMN2019002	10/18/2019
03A	None	VOC	Voluntary Limit to preclude 401 KAR 52:020	Initial	Method 25A	90 TPY	0.09 TPY	10,876 lb steam/hr	CMN20240010	10/28/2024
03E							0.05 TPY	29982.6 lb steam/hr		
02A	TO #1	HCN	401 KAR 63:020	Every 5 years	Method OTM-29	5.96E-9 ¹	2.71E-3 ³	Full Carbonization loads ³ , with F441, F481, and F482 Process rate at 1819.7°F	CMN20240006	10/29/2024
02D, and 02E	TO #2	HCN	401 KAR 63:020	Every 5 years	Method OTM-29	1.57E-4 ¹	4.85E-5	Full Carbonization	CMN20240007	10/30/2024

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
								loads Process rate/Load at 2150°C at 700-1100C Temperatures		
02B	TO #3	HCN	401 KAR 63:020	Every 5 years	Method OTM-29	5.96E-6 ¹	1.33E-4 ⁴	Full Carbonization, Process rate/Load at 1725.7°F	CMN20240008	10/31/2024
02C, 02F, and 02G	TO #4	HCN	401 KAR 63:020	Every 5 years	Method OTM-29	0.156 lb/hr ¹	0.00198 lb/hr	Full Carbonization Batch Load, Combustion Temperature 1794 °F	CMN20240009	11/5/2024

Footnotes:

¹Note: Due to process variability and issues with detection limits, these limits were removed from the permit. The Division determined that the HCN lb/hr limit is not necessary since modeling and health risk assessments show that 0.7 ton/yr limit adequately protects human health and the environment.

²Note: Testing to quantify the concentration and mass rate of HCN at the inlet of TO #2 and #3.

³Note: F481 and F482 no longer run carbonization cycles and are only used for heat treat. Run #1 of testing was stopped and not used.

⁴Note: Results were below the detection limit. However, the detection limits exceeded the permit limit.

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
90 tpy of VOC emissions	To preclude 401 KAR 51:017 & 401 KAR 52:020	Source-wide
9.0 tpy of individual HAP emissions	To preclude 401 KAR 52:020	Source-wide
22.5 tpy of combined HAP emissions	To preclude 401 KAR 52:020	Source-wide
0.7 tons/year of HCN	401 KAR 63:020	EU 02
0.688 tons/year of Naphthalene	401 KAR 63:020	EPs 04A & 04B

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 59:010 , <i>New process operations</i>	EUs 02, 04, & 08, EPs 017, 18, 19, 23, & 24
401 KAR 59:015 , <i>New indirect heat exchangers</i>	EU 03 & EP 01
401 KAR 60:005, Section 2(2)(d), 40 C.F.R. 60.40c to 60.48c (Subpart Dc) , <i>Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units</i>	EU 03
401 KAR 60:005, Section 2(2)(oooo), 40 C.F.R. 60.4200 through 60.4219, Tables 1 through 8 (Subpart IIII) , <i>Standards of Performance for Stationary Compression Ignition Internal Combustion Engines</i>	EP 07B, 008B, 008C, 008D
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 Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines</i>	EU 07 & 008
401 KAR 63:002, Section 2(4)(iiii), 40 CFR 63.11169 through 63.11180, Table 1 (Subpart HHHHHH) , <i>National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources</i>	EU 08
401 KAR 63:020 , <i>Potentially hazardous matter or toxic substances</i>	EUs 02 & 03, EPs 01, 04A, & 04B

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS (CONTINUED)

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 51:017 , <i>Prevention of significant deterioration of air quality</i> , this regulation is precluded by taking source-wide limits on VOC to preclude major source status.	Source-wide
401 KAR 52:020 , <i>Title V permits</i> , this regulation is precluded by taking source-wide limits of VOC, individual HAP, and combined HAPs to preclude major source status.	Source-wide
401 KAR 63:002, Section 2(4)(j), 40 C.F.R. 63.400 to 63.407, Table 1 (Subpart Q) , <i>National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers</i> , precluded by prohibiting the use of chromium-based water treatment chemicals in the cooling towers.	EU 04

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 AERMOD on July 9, 2026, of potentially hazardous matter or toxic substances (Naphthalene, Hydrogen Cyanide, Benzene, Toluene, Ethylbenzene, Xylene, and Methyl Ethyl Ketone (2-butanone)) 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 ensure compliance with the requirements of 401 KAR 63:020.

AERMOD was performed for the above-listed pollutants, and the results indicated that the facility's modeled potential ambient concentration of naphthalene was not in compliance with 401 KAR 63:020. In response, the facility conducted sampling of the slip-stream inlet and the cooling tower basin outlet to accurately quantify the mass of VOCs and HAPs present within the tower water system. Based on this evaluation, the facility determined that treating the slip stream and returning the treated water to the tower as make-up water would reduce naphthalene and VOC emissions by lowering the mass of these compounds available for volatilization.

Accordingly, a naphthalene emission standard of 0.688 ton per year has been added to the permit, and Section I includes a compliance schedule requiring the facility to implement the slip-stream treatment system and complete all associated actions necessary to achieve compliance with the naphthalene emission limit.

Single Source Determination

N/A

SECTION 5 – PERMITTING HISTORY

Permit	Permit Type	Activity #	Complete Date	Issuance Date	Summary of Action	PSD/Syn Minor
F-07-006	Initial	APE20060003	1/17/2007	5/4/2007	Initial Construction Permit	N/A
F-07-006 R1	Minor Revision	APE20110001	8/15/2011	11/14/2011	Addition of new equipment	N/A
F-13-023	Renewal	APE20110003	10/11/2012	11/19/2013	Renewal/ corrections	N/A
F-13-023 R1	Minor Revision	APE20140001	5/21/2014	6/23/2014	Permit language change from chamber temp to operating temp.	N/A
F-13-023 R2	Minor Revision	APE20140006 & APE20140007	10/11/2012	12/22/2014	Addition of EP 18 and Insignificant Activity	N/A
F-13-023 R3	Sig Revision	APE20160003	10/28/2016	1/21/2017	Addition of new Equipment	N/A

SECTION 6 – PERMIT APPLICATION HISTORY
N/A

APPENDIX A – ABBREVIATIONS AND ACRONYMS

AAQS	– Ambient Air Quality Standards
BACT	– Best Available Control Technology
Btu	– British thermal unit
CI	– Compression Ignition
CO	– Carbon Monoxide
CVI	– Carbon Vapor Infiltration
Division	– Kentucky Division for Air Quality
ESP	– Electrostatic Precipitator
GHG	– Greenhouse Gas
HAP	– Hazardous Air Pollutant
HCN	– Hydrogen Cyanide
HF	– Hydrogen Fluoride (Gaseous)
HP	– Horsepower
ICE	– Internal Combustion Engine
MSDS	– Material Safety Data Sheets
MMBtu	– Million Btu
mmHg	– Millimeter of mercury column height
NAAQS	– National Ambient Air Quality Standards
NESHAP	– National Emissions Standards for Hazardous Air Pollutants
NGE	– Natural Gas Effluent
NMHC	– Non-Methane Hydrocarbons
NO _x	– Nitrogen Oxides
NSR	– New Source Review
OM&M	– Operating, Monitoring & Maintenance
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
RICE	– Reciprocating Internal Combustion Engine
SI	– Spark Ignition
SO ₂	– Sulfur Dioxide
TF	– Total Fluoride (Particulate & Gaseous)
TO	– Thermal Oxidizer
VOC	– Volatile Organic Compounds
W&B	– Wheel & Brake

APPENDIX B – INDIRECT HEAT EXCHANGER EMISSIONS LIMITATIONS

EU	Fuel	Capacity (MMBtu/hr)	Construction Date	Notes/ Removal Date	Basis for PM Limit	Total Heat Input Capacity for PM Limit (MMBtu/hr)	Basis for SO₂ Limit	Total Heat Input Capacity for SO₂ Limit (MMBtu/hr)
03A	Natural Gas; NGE	32.658	1999	N/A	Section 4(1)(c)	32.658	Section 5(1)(c)2.	32.658
03B	Natural Gas; NGE	32.658	2000	N/A	Section 4(1)(c)	65.316	Section 5(1)(c)2.	65.316
01	Natural Gas	1.595	2007	N/A	Section 4(1)(c)	66.911	Section 5(1)(c)2.	66.911
03C	Natural Gas; NGE	31.434	2012	N/A	Section 4(1)(c)	98.345	Section 5(1)(c)2.	98.345
03D	Natural Gas; NGE	40.823	2017	N/A	Section 4(1)(c)	179.991	Section 5(1)(c)2.	179.991
03E	Natural Gas; NGE	40.823	2017	N/A	Section 4(1)(c)	179.991	Section 5(1)(c)2.	179.991